UPDATE! MAGAZINE

APRIL 1991
$ 4.95

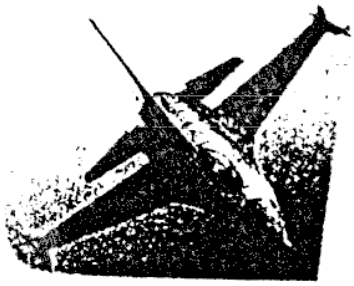
Take it to the Limit

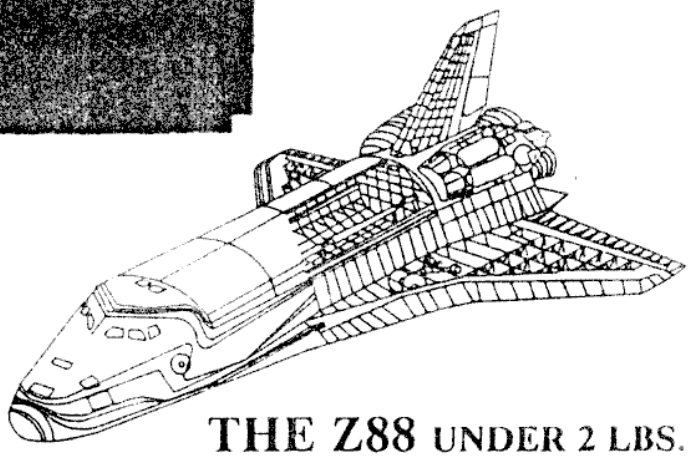
A Quarterly Magazine for the users

OF

SINCLAIR COMPUTERS

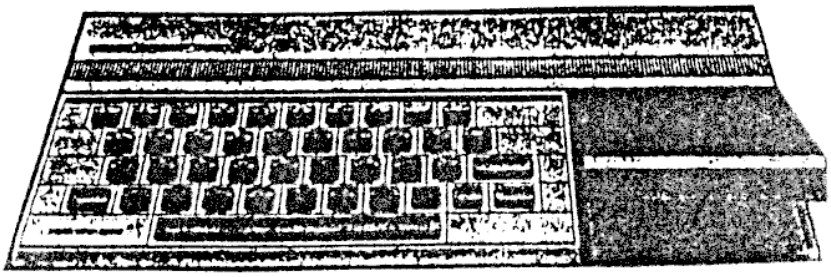
The Sinclair QL
-a 32 bit CPU Powerhouse!



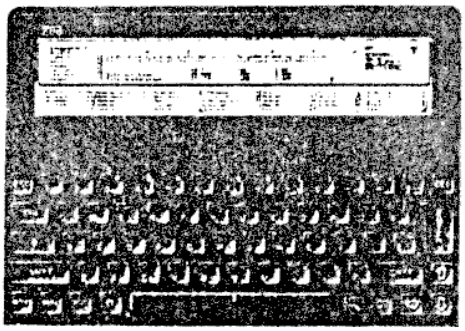


THE Z88 UNDER 2 LBS.

A Computer Without Compromise



The TS-2068 Workhorse



UPDATE COMPUTER SYSTEMS
P. O. Box 1095
Peru, Indiana 46970

NEWS AND NEW PRODUCTS

* UPDATE COMPUTER SYSTEMS *

UPDATE COMPUTER SYSTEMS is Edited and Published by Carol and Frank Davis of P.O. Box 1095, Peru, Indiana 46970. Phone number is 317-473-8031, with normal phone hours being between 5 P.M. and 9:30 P.M. Eastern Time during the week and Noon to 6 P.M. on weekends. When we are not there or unavailable, please leave a message with our answering machine. Unless urgent you will be answered by mail.

Mailing date for all issues is the fifteenth of the issue month.

The magazine is published on a quarterly basis in the months of October, January, April and July. All subscriptions begin and end at the same time...first issue being October and all renewals coming due after receipt of the July issue. The cost is $18.00 U.S. for a one year subscription for North America, and for those outside of this area $20.00 U.S. We accept personal and business checks, money orders and to obtain back issues prior to October 1990, please contact the former Publisher, Bill Jones at 1317 Stratford Ave., Panama City, Florida 32404. He will gladly provide you with the needed issues and information. The use of a Self Addressed Stamped Envelope would be appreciated and help to speed a reply.

Assistance in Publishing this magazine is provided by Eliad P. Wannum, poet, computer user and all round good guy. The magazine is made possible by the regular contributors such as Peter Hale, Bill Cable, Al Feng, Bob Hartung to name a few, and by the many contributions of other writers and programmers. Your contributions to this magazine are welcome. This is truly a magazine BY THE USER AND FOR THE USER OF SINCLAIR, TIMEX AND CAMBRIDGE COMPUTERS. When we cover other operating systems such as CPM or MSDOS it will be in relationship to our computers or emulators for our systems to run their software. We primarily cover disk based systems and software for the TS2068, Spectrum, QL, Z88...and will cover items on the TS1000 if disk drive based or in relationship to using it with the above mentioned computers. We do accept reviews of peripherals that are useable by our systems, such as scanners, printers, modems, etc. Submissions should be on disk or hard copy (two copies and at least NLQ, no draft mode). If there is artwork, please let us know in what order it should be used, and provide it as a saved screen or hard copy screen dump. The format is very relaxed. Just pay attention to the width of the pages and allow 3/4 inch top and bottom, and make the left and right margins wide enough to accomodate a 3 hole punch that does not cut out some of the text. We have enlarge and reduction capacity to adjust a page, but may lose some print legibility in the process. Most important is legibility. Draft quality dot matrix does not reproduce well. Print size preference is ELITE 12 characters per inch. PICA 10 characters per inch is okay also, but please no condensed print. Please do not make programs submitted on cassette tape under any circumstance, disk or hardcopy only. Exceptions to this would be the wafers used on the Rotronics Wafadrive for the Spectrum or TS2068 with emulator. Z88 programs on disk may be in either IBM or QL format or hardcopy. TS2068 programs may be LLISTED in 32 chr. lines, but that is not solely necessary, just do not send a copy protected disk that needs to be LLISTED.

UPDATE COMPUTER SYSTEMS PAGE DIRECTORY, APRIL 1991

The computer that an article concerns is marked by using the following mark at the start of the page number-TS2068 = *,QL = # ,Z88 = % . There will be no mark if the article or ad applies to all or several different computer systems.

Inside Front Cover contains magazine basic information
Page No. 1---Directory
Page No. 2---Editorial by Frank Davis
Page No. 3---Notice From Bill Jones/ Bottle Cap Software Ad
*Page No. 4---DataStore and DataFetch by David Solly
*Page No. 10---Disjointed Programming Tips by Bill Jones
*Page No. 11---Byte Power Ad
*Page No. 12---A Menagerie Of Opinions & Some Programming Tips by Bill Jones
Page No. 15---Amateur Programming Support by Bill Jones
*Page No. 15---Print Factory Graphics Ad by J. McMichael
*Page No. 16---Customized 2-Column Tasword Printouts by Bob Hartung
*Page No. 17---2068 Home Rom Corrections-Part 1 by Bill Pederson
#Page No. 25---Cable Column by Bill Cable
#Page No. 26---Wood and Wind Computing Ad
Page No. 27---Mechanical Affinity Ad
#Page No. 28---How To Do Do In TK2 by Bob Hartung
Page No. 29---RMG Ad
#Page No. 30---QLUSTer/QL Utilities by Al Feng
Page No. 35---Eliad's Wanderings by E. P. Wannum
#Page No. 36---Printer "A/B" Switch Eliminator by Mort Binstock
Page No. 37---Ed Grey Enterprises Ad
*Page No. 38---The Sinclair Desktop Publishing Journal by Mike Felerski
#Page No. 42---QL Desktop Publishing by Frank Davis
*Page No. 43---Two Column + Wide Tasword Printouts by Bob Hartung
*Page No. 43---Dropped Bytes by Bob Hartung
%Page No. 44---Domino Cubes Ad
%Page No. 45---Z88 Programs On Disk from Domino Cubes
#Page No. 48---Non-Epson Screen Dumps from Easel by Bob Hartung
#Page No. 48---EMSoft Ad
#Page No. 49---Computer Therapy by Bill Woodward
Back Covers ---Issue Disks for TS2068 and QL

All material used in this publication is copywritten and remains solely in ownership by either the Magazine or the author. To reprint from this magazine please contact either the magazine or specific author. All Issue Disks are copyrighted and remain the property of the software author. All hardware advice is followed at the users sole risk.

EDITORIAL by Frank Davis, Editor

Welcome to another issue of this magazine. We found ourselves running a wee bit late once again. This time it was not due to mechanical failure, but rather to Carol injuring herself and ending up with 6 to 8 weeks on crutches and a walker in order to get around. She is slowly getting better, and will hopefully be well enough to attend our user group picnic the 8th of June at our country place. As she normally does all the cut and paste, photocopying and collating, this procedure got slowed down. We may be a bit late at times, but we will get there. Your patience is appreciated.

Jack Dohany and I spoke recently and he told me he was a bit hasty in his announcement of pulling out of the retail end of selling Sinclair products, and that he will be taking orders till he has finalized arrangement for his products to be carried by other dealers. He did say that service would not be fast during this time period, but that he will deliver.

We have had a few good readers and Sinclair users pass away recently and I wish to dedicate this issue to them. They are Don Lamen, Warren Fricke, and Marinus W. Heuseveldt. They were all people who loved Sinclair computing and to whom I had spoken or met. They will be missed by all, and I extend our condolences to their families.

Have all of you heard that there will not be a Sinclair or Timex-Sinclair Fest this year? Guess what...that is not entirely true! For many years the Dayton Microcomputer Association of Dayton, Ohio has produced the official COMPUTERFEST, and has offered us space at this years show for a subshow for Sinclairs and Timex-Sinclair. This show has around 15,000 attendees each year and has long (at least the past six years I know about) had a few Sinclair groups attend with a couple of Sinclair lectures. Gary Ganger of Dayton (he was on the committees for the shows I produced for Sinclairs at Cincinnati and Indianapolis in 1986 and 1987) is the contact person for this at 513-849-1483. The show will take place August 24th and 25th at the Hara Arena in Dayton Ohio. General admission tickets for this are $5.00 each. For those interested there will be a banquet the night before. Contact Gary for more info on that by phoning at a decent hour or writing him at his home at 812 Hedwick Street, New Carlisle, Ohio, 45344-2619.

At this time SMUG from Wisconsin, ISTUG from Indiana, the Dayton Timex-Sinclair Users Group will definitely be there. I have heard that CATUG of Illinois, CATS of D.C., and the Cleveland Sinclair Users Group may possibly be there. Mechanical Affinity will be there, QUANTA, and of course UPDATE Magazine all ready to serve you. I talked to Ed Grey about this and he seemed interested. Now it is up to you readers, users and other groups to help bring this about. Contact Gary and offer him some help with this, or to do a seminar. With SMUG there I expect they will be bringing more Timex stuff from Zebra to sell.

In order to reserve a dealer, user group or flea market table all in the same block Gary will need to have your money and reservation before June the first. This is our chance, so let us take advantage of this. We hope to have much more information on this for the July issue of UPDATE. See you all at the show.

NOTICE

From: Bill Jones, past Publisher

(This is not a disappearing act.)

My Software titles appear in most back issues of Update Magazine with my own personal address as the ordering source. From this day forward I would like for all orders for my software to be addressed to UPDATE MAGAZINE and not to me. In the event that I receive orders the orders will be forwarded to UPDATE for fill. The reason for this is that I am a philanthropoid. I want to continue to support Update and its subscribers. The proceeds of each order of my software is split 50% with the magazine, which provides a small but continuing income to help defray publishing expense.

But not to worry! I will continue to welcome all HELP calls and will continue to exchange any faulty disks supplied by either myself or Update, and will continue to send in articles for Frank Davis to selectively publish. If you get tired of these articles, write some for publication and mine will be crowded out!

Right now I'm working on conversions of all of my software to both OLIGER DOS and LKDOS and will release them to Update as they are finished. But this work is a slow process. For example; the Hybiscus software conversion to Oliger DOS involves work on the syntax and program lines of 2.5 Megabytes of programming in two formats (40 and 80 track).

Finally, I wish to give my thanks to the many who have continuously written or called to express their warm friendship and cooperation over the past four years. You subscribers are truly a friendly and cooperative group, the very best association of fine people in the whole World. I hope that all of you will give Frank and Carol Davis your friendship and support. They truly deserve it. AND- THANKS for being my Friend! _BJ-

---

OS 64 Software

For Owners of Zebra Systems OS64 Cartridge

From: **Bottle Cap Software**
1284 Brushwood Ave.
Cincinnati, OH 45224

ALL Titles are **$5 + $1** S&H and come on quality cassette with **FULL** instructions!!

For a catalog of our other programs for TS2068/TS1000 Spectrum and TS2068+OS64 Send a large SASE.

Checkbook Keeper/Balancer

This program not only keeps track of your checks, deposits, and ATM withdrawals but actually has a special routine that helps you **Balance** your account at the end of the month! And all in 64 columns making it easy to read.

Maxi-Bill Credit Card Payer

Maxi-Bill helps sort out all of your credit card bills at the end of the month and informs you as to **how much to pay** on each bill in order to **save the most on interest!** Amounts, payments, and expected interest are all displayed on one screen!

Cassette Index Card Maker

Makes professional cassette index cards for cassette storage boxes on almost any paper stock.

All above programs require OS64!

DATASTORE() AND *DATAFETCH()* TWO LARKEN DOS PROCEDURES FOR HISOFT ® PASCAL

PROGRAM AND ARTICLE BY
DAVID SOLLY

When you have become spoiled by having a disk drive system on your Timex/Sinclair 2068, such as I have, you soon begin to wonder what use is there in having a compiler which allows you to write programs which are easy to maintain and run like wildfire when compiled but grind snail's pace when they have to access the cassette drive to store or fetch data. This has been the problem with HiSoft Pascal compiler for the Timex/ Sinclair 2068; however, with the new procedures *DataStore()* and *DataFetch()* variable data can be stored to and fetched from disk under LARKEN DOS.

How the Procedures Work

All versions of Pascal use a stack in one form or another to keep track of parameter passing amongst procedures and functions. HiSoft Pascal uses the IX register to perform this function. In the case of *DataStore()* and *DataFetch()*, thirteen bytes, starting from IX+2, become reserved in the IX register when the procedure is called. Depending upon whether it is the *DataStore()* or *DataFetch()* procedure that is being called, the first two bytes contain the number of bytes which are to be transferred to or from the disk. This number is usually passed to the procedure through the function *SIZE()*.[1] The next two bytes contain the start address of the segment to be transferred to disk or to where it is to be placed in RAM. This address is usually supplied through the function *ADDR()*. The remaining nine bytes contain the name under which the data will be stored to, or, fetched from the disk. In the demonstration program the variables *Name* and *FileName* have been created of the user defined type *iostring* to pass the file name from where it is read from the keyboard to the procedures. Once the required information has been passed to the procedure being called, the INLINE routine in turn transfers the information to certain memory locations in the LARKEN DOS cartridge and invokes the proper routines within LARKEN DOS to store or fetch the data.

---

[1] The *DataStore()* and *DataFetch()* procedures, like their tape counterparts *DIN()* and *DOUT()*, can be used to transfer virtually any section of RAM, including the screen buffer, on or off the disk by supplying the start and length parameters in the locations occupied by *ADDR()* and *SIZE()*.

Demo Program[2]

The demonstration program creates a small telephone directory in which you can store ten names and ten numbers. The program will ask you to enter ten names and numbers to fill the directory. Next it will ask for a name under which to store all the data which you have entered into the variable *Directory* to the disk. Finally it will ask for the file name of the data to retrieve from the disk. When you first run the program you will have to reuse the name you just used to store the data or the program may crash. If you run the program several times and create a number of files on the disk under different names you can then use any of these names and the data stored under the name selected will be retrieved and displayed.

Program Listing

```
1000 {$L-}
1010 PROGRAM STRDIR;
1020
1030
1040 CONST
1050
1060   MaxLen = 32;
1070   MaxEnt = 5;
1080
1090
1100 TYPE
1110
1120    iostring = ARRAY[1..9] OF CHAR;
1130
1140
1150
1160   String = RECORD
1170              CharStr : ARRAY [1..MaxLen] OF CHAR;
1180              Len     : INTEGER
1190            END;
1200
1210    Entry = RECORD
1220              Name : String;
1230              Number : String;
1240            END;
1250
1260
```

[2] Based in part on the HiSoft Pascal demonstration program *Tape*.

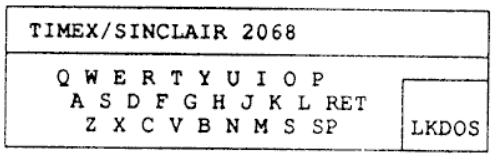
```
1270
1280 VAR
1290
1300   Directory : ARRAY [1..MaxEnt] OF Entry;
1310   I         : INTEGER;
1320   Ans       : CHAR;
1330   FileName  : iostring;
1340
1350
1360
1370 PROCEDURE StrRead (VAR EntryData : String);
1380
1390   BEGIN
1400
1410     EntryData.Len := 0;
1420     IF EOLN THEN READLN; {Clear the buffer}
1430
1440     WHILE NOT EOLN DO
1450
1460       BEGIN
1470         EntryData.Len := EntryData.Len + 1;
1480         READ(EntryData.CharStr[EntryData.Len])
1490       END;
1500
1510
1520      READLN; {Required after READ}
1530
1540   END;
1550
1560
1570
1580 PROCEDURE StrWrite(VAR PrintData : String);
1590
1610
1620   VAR
1630
1640     Letter : INTEGER;
1650
1660   BEGIN
1670
1680     FOR Letter := 1 TO PrintData.Len DO
1690
1700       WRITE(PrintData.CharStr[Letter])
1710
1720   END;
1730
1740
1750
1760
1770 PROCEDURE ReadData;
1780
1790 BEGIN
1800
1810
1820   PAGE;
1830
1840   FOR I := 1 TO MaxEnt DO
1850
```

```
1860      BEGIN
1870
1880        WITH Directory[I] DO
1890
1900          BEGIN
1910            WRITE('Enter Name ',I:2,', Please >');
1920            StrRead(Name);
1930            WRITELN;
1940            WRITE('Enter Number, Please >');
1950            StrRead(Number);
1960          END;
1970
1980       END;
1990
2000   END;
2010
2020
2030 PROCEDURE PrintData;
2040
2050
2060 BEGIN
2070
2080 FOR I := 1 TO MaxEnt DO
2090
2100    BEGIN
2110
2120      WITH Directory[I] DO
2130
2140        BEGIN
2150
2160        StrWrite(Name);
2170        WRITE('  ');
2180        StrWrite(Number);
2190        WRITELN
2200
2210        END
2220
2230     END
2240
2250 END;
2260
2270
2280 PROCEDURE DataStore (Name : iostring;
2290                       Start, Bytes : INTEGER);
2300
2310 BEGIN
2320
2330    INLINE (
2340
2350    #F3, #CD, #62, #00, #3E, #0B, #32, #02,
2360    #20, #DD, #E5, #21, #22, #20, #06, #09,
2370    #DD, #7E, #06, #FE, #00, #20, #02, #3E,
2380    #20, #77, #23, #DD, #23, #10, #F1, #DD,
2390    #E1, #CD, #CC, #00, #DD, #6E, #04, #DD,
2400    #66, #05, #22, #33, #20, #DD, #6E, #02,
2410    #DD, #66, #03, #22, #31, #20, #CD, #CF,
2420    #00, #3A, #64, #00, #FB
2430
```

```
2440          )
2450
2460 END;
2470
2480
2490
2500 PROCEDURE DataFetch (Name : iostring; Start, Bytes : INTEGER);
2510   BEGIN
2520
2530     INLINE(
2540
2550     #F3, #CD, #62, #00, #3E, #64, #32, #B0,
2560     #5C, #3E, #0B, #32, #02, #20, #DD, #E5,
2570     #21, #22, #20, #06, #09, #DD, #7E, #06,
2580     #FE, #00, #20, #02, #3E, #20, #77, #23,
2590     #DD, #23, #10, #F1, #DD, #E1, #CD, #C6,
2600     #00, #3A, #B0, #5C, #FE, #65, #28, #15,
2610     #DD, #6E, #04, #DD, #66, #05, #22, #33,
2620     #20, #DD, #6E, #02, #DD, #66, #03, #22,
2630     #31, #20, #CD, #C9, #00, #3A, #64, #00,
2640     #FB
2650
2660          )
2670   END;
2680 BEGIN {MAIN PROGRAM}
2690
2700 PAGE;
2710
2720 WRITELN('The object of this program is to demonstrate');
2730 WRITELN('how type may be developed to emulate the');
2740 WRITELN('type String which is found in other versions');
2750 WRITELN('of Pascal and also to demonstrate how data');
2760 WRITELN('stored within records and arrays may be');
2770 WRITELN('transferred to and from the LARKEN Disk');
2780 WRITELN('system using the new procedures "DataStore()" and');
2790 WRITELN('"DataFetch()".');
2800
2810 WRITELN;
2820 WRITELN;
2830 WRITELN('Hit any key when ready.');
2840 READLN;
2850 READ(Ans);
2860 ReadData;
2870 PAGE;
2880 WRITELN('Now to store the data to disk');
2890 WRITELN;
2900 WRITE('Enter a name for disk storeage >');
2910 READLN;
2920 READ(FileName);
2930 DataStore(FileName,ADDR(Directory),SIZE(Directory));
2940 PAGE;
2950 WRITE('Data Stored.');
2960 WRITELN;
2970 WRITELN('Now to fetch the data from the disk.');
2980 WRITELN;
2990 WRITELN('Enter a name for disk fetch >');
2995 READLN;
3000 READ(FileName);
```

```
3010 READLN;
3020 DataFetch(FileName,ADDR(Directory),SIZE(Directory));[3]
3030 PAGE;
3040 PrintData;
3050 WRITELN;
3060 WRITELN;
3070 WRITELN('End of Demonstration') [4]
3080
```


Sir Clive's Castle BBS



1402-1545 Alta Vista Drive
Ottawa, Ontario
Canada
K1G 3P4

(613)745-8838

300/1200 Baud
24 Hours A Day

- Message Bases
- Sinclair Computer Information
- Sinclair File Transfers
- LARKEN DOS SIG
- Pascal Programming SIG
- No User Fees!

---

[3] *DataFetch()*, unlike its tape counterpart *DIN()*, requires both the start and length parameter in its argument.

[4] This program source code is available from Sir Clive's Castle BBS, Ottawa, Canada at (613)745-8838. The file is called *STRDIR.PS*.

Disjointed Programming Tips

TS-2068 Disk Drive Operations

Bought a six pack of DSDD Diskettes from "SAMS" for $18.00. Sams is the discount chain owned by Walmart . These were Maxwell brand and the 60 diskettes in the pack cost 30 cents each. Used them up in 2 days copying the big "Hybiscus" software for filling orders. Wish we had a faster DISK COPY program! It takes 8 minutes to copy an 80 track disk!

While copying several disks the disk drive heats up and the resukts seem to be an occasional CRC ERROR, either during Disk Copy or during FORMAT. It could be that I'll need to replace the drives pretty soon. But my solution for now is to stop for a cuppa and let the drives cool down. So far, the Error Disk will re-format or copy without problems.

EXCELLENT LKDOS DISK UTILITIES: The Toronto club has many disk utilities in their library. One that I find particularily useful is "COPY12.BI". This program allows the copying of either "Selected Files" or ALL FILES.

EXCELLENT OLIGER DISK UTILITIES: The "DOSDEX GROUP", by Bob Hartung is available as an Issue Disk from Update Magazine. This is the most complete set of disk tools that I have seen.

WHAT IS A "DOS"?

A Disk Operating System: A collection of utility programs designed to send and receive packages of data to and from a disk drive magnetic recorder. The Disk Drive is controlled by BASIC PROGRAMMING. Such Basic Programming is stored in Machine Code form in either EPROM or RAM MEMORY. Mostly our TS-2068 DOS versions are stored in permanent EPROM memory, but there is one DOS (RAMEX) that is loaded from Disk into the computer's RAM Memory. All DOS require an Interface between the computer and the disk drive. The interface has a "Disk Controller Chip" that intrepets Basic Commands into signals that "instructs" the disk drive to perform the RECORD or PLAY BACK tasks.

TWO TYPES of TS-2068 DOS:

Actually there are five, but only two DOS remains Actively supported. These are the "Oliger DOS" and the Larken DOS (LKDOS). The DOS consists of hardware boards that plug in to the rear deck of the TS-2068. The hardware boards contain the Disk Interface and EPROM Memory which contains the DOS programming. The hardware boards connect to the Disk Drive by means of a 34 conductor flat ribbon cable. The manual that is supplied with the hardware board explains the usage of the system.

Availibility: John Oliger, 11601 Whidbey Drive, Cumberland, IN 46190. or RMG ENTERPRISES, 1419 1/2 7th St., Oregon City, OR 97045. or Ed Grey Enterprises, PO Box 2186, Inglewood, CA 90305. A letter to these sources will bring a catalog of their wares.

LAST CHANCE: (To Upgrade your TS-2068 to Disk Drive): Larken Electronics has discontinued making the LKDOS hardware. There are a few systems remaining in stock by RMG and Ed Grey. John Oliger remains as the only active supporter (including Service) for Disk drive systems for the TS-2068.

COMPARISONS: Oliger DOS is the fastest to execute Disk Drive commands. Oliger DOS has a built in RGB Interface to use an RGB Monitor. LKDOS has one exclusive capability of "Sequential Files" Save and Load. Other than these two features the two DOS are almost identical. If I were buying a DOS today I would select Oliger DOS because of its continued (timely) service and support.

RECIPE for Automatic Pancakes: 1. Use any brand of Pancake Mix or roll your own. 2. To the batter add two pinches of ground Mexican Jumping Beans. 3. Pour small portions onto hot griddle. ** The result: As each side gets done the pancakes flip themselves over. Warning: Dont use mor'n two pinches else they may stick to the ceiling. (Recipe given by a grizzled old goucho of questionable integrety). Until then, See You! BJ_

SHARP'S
BOX 326
MECH., VA. 23111
TELE (804) 730-9697
FAX (804) 746-1978

BYTE POWER CATALOG

ITEM	DESCRIPTION	PRICE
	*** MAGAZINES ***	
AUGUST 1986	GRAND PRIX, HANG MAN, ETC,	5.99
SEPTEMBER 1986	CONSTRUX, PHONE BOOK, ETC,	5.99
OCTOBER 1986	AIR DEFENCE, CHARTS, CHECKERS, ETC,	5.99
NOVEMBER 1986	PLUKKERS HUNT, TOWERS OF HANOI, ETC,	5.99
DEC 86/JAN 87	GHOST HUNTERS, GRAFIX, Q*BER, ETC,	5.99
FEBRUARY 1987	SPREAD SHEET, TEXT PRINTER, ETC,	5.99
SPRING 1987	QUALIFIER, DECISION MAKER, ETC,	5.99
FALL 1987	QUIZOMANIA, INTEREST CALCULATOR, ETC,	5.99
FEBRUARY 1988	CONFLICT, PACHIZEE, MUSI-PRINT, ETC,	5.99
MAY 1988	FUTURE HERO, RENUMBER II, PUZZLE, ETC,	5.99
FALL 1988	SPREADSHEET II, SCREEN COMPACTOR, ETC,	5.99
WINTER 1989		5.99
BEST OF ARCADE	BEST GAMES (AUG 86-FEB 88)	22.95
BEST OF BUSINESS	BEST BUSINESS PROGRAM & UTILITIES	22.95
BEST OF ENTERTMNT	BEST ENTERTAINMENT & STATEGY GAMES	22.95
6 ISSUE SUBSCRIPTION	(OR ANY 6 BACK ISSUES)	32.00
DEMO/CATALOG	SAMPLE OF BYTE POWER MAGAZINE & CATALOG	3.00
	*** OTHER SOFTWARE ***	
FONTS II	28 FONTS, 64 COLUMN PRINT, DOUBLE, ETC,	22.95
2+FAST	SAVE & LOAD AT HIGH SPEED (3300 BPS)	22.95
PRINT FACTORY	PRINT ANY TYPE OF DOCUMENTS (POSTER etc)	27.95
THE COMPANION	LOTS OF IMAGES, FONTS, etc, FOR FACTORY	27.95

THE PRINT FACTORY COMES ON 3 TAPES AND THE COMPANION ON 4 TAPES.

****

NOTE: Anyone with remaining issues can, on request, exchange the remaining issues credit (in part or in full) with any of the above software (not exceeding credit value).

All prices include shipping & handling charges

Send all checks & money orders (U.S. funds only) to:

BYTE POWER
1748 Meadowview Avenue,
Pickering, Ontario, Canada L1V 3G8

A Menagerie of Opinions

And some programming tips

By Bill Jones

Hey Guys and Gals, Spring has sprung here in NW Florida, so it will be Sailing and Fishing for me for the next 9 months. I just can't sit here at the computer lookin outa the winder at good sailing weather. So, dont expect much wizdem outa me for the next few issues.

This time I'll give you a little program I named "Simple Simon Labels". This is so easy that I whipped it up in a few minutes instead of hunting to find a more complicated label printing program. It's done in LKDOS, but is easy to go the Oliger DOS route. In fact if you're using Oliger DOS you can just eliminate the MERGE in line #60 and substitute <LET /p=o:PAUSE 0>. This will let you set your printer manually for whatever print style you want. Then when the printer is set, just touch ENTER and you'll be ready.

The ""Init"" program has been given before in back issues and I include it just to show again how useful it is for setting up LKDOS and the printer styles. So, we wont discuss "Init".

We will discuss the Simon program a bit. Labels come in different sizes. It is the DEPTH dimension of the label that might give you problems. "Simon" is set for an ordinary label that accommodates four lines, with two line spaces between the labels. If you are using a different size: BIGGER SIZE, add another data string or two, like E$, F$, etc, to line number 10. Correct the spacing between lines by adding or deleting ticks in line number 90 (just before the "NEXT N". For SMALLER size labels, delete the D$ input in line #10, and delete a tick or two in line #90.

CRANKY DISK DRIVE OPERATION

I recently lost the use of a 40 track drive. It had been giving a lot of CRC errors and finally I got fed up and decided to add it to a favorite fishing reef. By the way, if you want to compound Drive problems, while spending some money foolishly, the way to do it is to take a drive to a repair shop. They'll nick you for $40 to $60 and the problem "might" be fixed. And while you're waiting for your worn out drive to be fixed you could be calling Rod Gowen to have a new replacement sent in. The cost will be near the same. The diff is you'll either have your worn out drive (possibly fixed temporarily) or you'll have a new one that carrys a 90 day dealer warranty.

DRIVE PROBLEMS: First let me say that I was talking to ole Frank Davis tother day. He said that Bob Swoger had run into some customer problems with some versions of LKDOS boards. Seems that some versions dont make the disk waltz like it should. I hope that Frank can get Bob to do a more informative article about that situation, perhaps in this issue. So I'll leave you hanging on that.

CRC PROBLEMS: There are quite a few sources for these. Frankly I dont know what CRC means, except thats what the screen says when LKDOS wont load or save a program or data. Oliger DOS says something different, but both mean the same problem. Over the years I have had about a dozen folks send disks back saying that they wont load nuttingstein, only to load perfectly for me. One would think that the majority of such problems would be a faulty Diskette, but that seems to be the least likely problem of all. Out of several thousand diskettes used I have had perhaps one out of 50 that gave problems. And, strangely, the ones that gave problems were the most expensive diskettes. I now buy diskettes via mail order in lots of 50 for 59 cents each.

TYPE OF DISKETTES 40 or 80 Track: Did you know that it makes no difference? Just dont buy IBM "HD" Diskettes. The "HD" diskette means that they are made for the 1.2 or 1.44 Megabyte format capability of the IBM

systems. These HD disks have sector markers imbedded in the recording medium at the factory. We can Format them and they will "seem to work", but after about a day or two the programs recorded wont load. Always buy the el-cheapo 59 cent disks (DSDD) and you wont have diskette problems. Chances are that if you buy from Radio Shack they'll sell you HD Diskettes. The clerks dont know no difference.

The DSDD diskette will format in in either your 40 or 80 track drive and work fine. LOAD or SAVE errors are mostly caused by the disk drive itself being out of kilter. The problem can be several: 1. The Recording Head can be mis-aligned. 2. Cigarette smoke or dust may have taken its toll on the drive. 3. The drive door latch may not be engaging the drive head close enough to the diskette. 4. The spring in the drive head mechanism may be weak. 5. The stepping motor of the drive may not be stepping the right distance.

How can one be sure it is the Disk Drive that is causing problems? Well, we can only use our noggin! Texas talk is, Use Horse Sense. If one diskette out of many fritzes then throw it away and use another diskette. If all out of a NEW box of diskettes fail, then try a different brand. If you cannot load programs sent to you, send the diskette back and the supplier will replace it. If the replacement disk wont load, then it is likely that your disk drive recording heads are not aligned properily, or you have other drive problems.

OLD DRIVES MAY BE SLOW: Maybe you have one of them real ole timers? If so, and you are having SAVE LOAD problems, try FORMATING with a slower speed setting. The Oliger DOS has a "LET/h=" command to let us set a lower speed. Both Oliger and LKDOS defaults to 6 ms speed of recording. And all disk drives made after about 1978 are high speed drives. If you have one of these old timers, chances are 9 to 1 that you should send it to me for it to be added to my fishing reef. If not, be prepared to lose many of your fine epistles as you continue to struggle with it. Now I know that this has not been a hi-tech analysis of disk drive problems, but the most detailed technical data would not have added practicality. We cannot do much to fix a cranky drive, and the repair cost equals the replacement cost. (About $60.00).

The AbC's of >READ DATA RESTORE<

Here is a little programming tutorial for the TS-2068, the Sinclair QL, or (bit my tongue) the IBM. It involves the use of READ DATA RESTORE. These three commands are always used together. You could think of them as the Three Musketeers, Three Blind Mice, or the Data Trio. Please refer to the listing while reading the explanations.

The program uses the N counter to count up from 65 to 90, which happens to be the ASCII Codes for the upper case alphabet. Variable x is given the initial value of 97, which is the code for lower case "a". From there on the plot thickens. As given, line #20 "RESTORES line #70, which is the READ line. RESTORE is used to point to the right line to READ some DATA bits. Line #30 then READs the value of varaible x for each count of the counter N. Line #40 converts the numerical values of both "N and X" into the literal character represented by the numbers, and then prints the two characters. Line #50 increments variable x and gets the next N count. Run the program for effect.

There is another data line at line #80. It is not used as the program exists because of the REM at line #8. Remove the REM at line 8 and install a REM at line 20. Run the program again for effect.

Note the long DATA line at line #80. The point for illustration is that the same effect of using a long DATA listing can be achieved by using a single DATA bit in a variable as is used

in line #70. Such a scheme requires RESTORE "Each TIME" the Data is to be READ, otherwise the "END OF DATA" Report would stop the program. Many of the better Arcade programs use a computed variable which is READ by the operating program in similiar fashion. Question: After changing to RESTORE line #80, Why is the value of "x" not changed to foul up the works at line #50? Ans: x is indeed changed at line 50, but x is READ again before printing by line #30. Keep on digging until you can unearth the logic. Have fun! _BJ-

Simple Simon Labels

```
  10 LET a$="": LET b$="": LET c$
="": LET d$="": INPUT "line 1"'a$
: BEEP 1,18: INPUT "line 2"'b$: B
EEP 1,18: INPUT "line 3"'c$: BEEP
 1,18: INPUT "line 4"'d$
  20 CLS : PRINT a$'b$'c$'d$: INP
UT "Correct? <1> yes <2> no";a: I
F a=1 THEN  GO TO 50
  30 INPUT "Enter line # to Corre
ct";x: INPUT "Enter new line";m$:
 LET a$=(a$ AND x<>1)+(m$ AND x=1
): LET b$=(b$ AND x<>2)+(m$ AND x
=2): LET c$=(c$ AND x<>3)+(m$ AND
 x=3): LET d$=(d$ AND x<>4)+(m$ A
ND x=4)
  40 CLS : GO TO 20
  50 CLS : INPUT "Install Labels
in Printer ENTER";y$
  60 INPUT "Is DOS Printer Driver
 READY     <1> Yes <2> No";z: IF
z=2 THEN  RANDOMIZE USR 100: MERG
E "Init.B6": GO SUB VAL "1993": D
ELETE 1993,
  70 CLS : INPUT "Enter Left TAB"
;tb
  80 INPUT "Enter number of label
s";x
  90 FOR n=1 TO x: FOR y=1 TO 4:
LPRINT TAB tb;a$'TAB tb;b$'TAB tb
;c$'TAB tb;d$: LPRINT '': NEXT n
```

Cont.- next pg.

The Merge "Init" Program

```
1993 BORDER NOT PI: PAPER NOT PI:
 INK VAL "7": CLS : LET pg=NOT NO
T PI: LET nn=NOT PI: PRINT AT 7,4
;"Touch:"'TAB 4;"<1> For TS-2040
 Printer"'TAB 4;"<2> For Dot Mat
rix"'TAB 4;"<3> For Daisy Wheel"
;AT 18,7; INVERSE 1;"PRINTER MUST
 BE ON"; INVERSE 0: PAUSE 0: LET
z=CODE INKEY$-VAL "48": LET pr=z-
1: IF z<1 OR z>2 THEN  GO TO VAL
"1993"
1994 IF pr=0 THEN  RANDOMIZE USR
100: OPEN #7,"LP": RANDOMIZE USR
100: POKE VAL "16092",0: GO TO VA
L "1998"
1995 CLS : RANDOMIZE USR VAL "100
": OPEN #3,"lp": PRINT AT 10,3;"E
LECT Type CPI:"'TAB 3;"[1] Aerco
 - Oliger"'TAB 3;"[2] Tasman CPI
"'TAB 3;"[3] A & J CPI": PAUSE 0
: LET a=CODE INKEY$-VAL "49": PRI
NT #0;"Printer Need Line Feed? <y
> <n>": PAUSE NOT PI: LET w$=INKE
Y$: LET b=(10 AND w$="y" OR w$="Y
")+(NOT PI AND w$<>"y" AND w$<>"Y
"): RANDOMIZE USR 100: OPEN #4,"d
d": RANDOMIZE USR VAL "100": POKE
 VAL "16096",a: RANDOMIZE USR VAL
 "100": POKE VAL "16090",VAL "138
": RANDOMIZE USR VAL "100": POKE
VAL "16092",0: RANDOMIZE USR VAL
"100": POKE VAL "16094",NOT PI: L
PRINT : RANDOMIZE USR 100: POKE 1
6092,b
1996 CLS : LET m=VAL "1997":: OUT
 VAL "127",VAL "27": GO SUB m: OU
T VAL "127",VAL "120": GO SUB m:
OUT VAL "127",VAL "1": PRINT AT 1
0,3;"SET PRINTER and Elect:"'TAB
 3;"[1] Pica 10 Cpi"'TAB 3;"[2]
Elite 12 Cpi"'TAB 3;"[3] Micron
15 Cpi": PAUSE 0: LET ps=CODE INK
EY$-VAL "48": LET lx=(VAL "80" AN
D ps=VAL "1")+(VAL "96" AND ps=VA
L "2")+(VAL "120" AND ps=VAL "3")
: LET qq=lx/VAL "2": OUT VAL "127
",VAL "27": GO SUB m: OUT VAL "12
7",(VAL "80" AND ps=1)+(VAL "77"
AND ps=2)+(VAL "103" AND ps=3): G
O SUB m: OUT VAL "127",VAL "27":
GO SUB m: OUT VAL "127",VAL "120"
: GO SUB m: OUT VAL "127",1: GO T
O VAL "1998"
1997 IF IN VAL "127"<>VAL "237" T
HEN  GO TO VAL "1997"
1998 RETURN
```

Amateur Programming Support

TS-2068, Sinclair QL and Z88

Isn't that what we all are, "Amateur Programmers"? I believe so. Some could be proffessionals, but to be so would have to junk out their Sinclair - Timex and do their programming with an IBM or Macintosh. Those are the only two computers that offer a wide market for a programmer to make a living. Fortunately, we orphan computer users have always had the services of Amateur programmers working to provide new programs or up-grade modifications of older ones. AND, that is what UPDATE MAGAZINE is all about.

This reminds me of some past experience in managing a fleet of aircraft. Often there would be problems of frequent failure or un-reliability of certain systems. The "school way" of dealing with such problems would be to give an order to the next manager in the command line, "Fix the Problem". But that approach hardly ever works. The best approach is to call together a group of mechanics who know the system and ask for their participation to solve the problem. The point is "group participation" is a powerful force for almost any endeavor.

Most of us are hesitant to give advice about subjects. But, like the lowly mechanic, we each have ideas that can be useful to others. In fact, I've learned more about programming from reading inputs from other "amateur programmers". Each has his own exclusive innovations. To mention one, Warren Fricke's occasional articles in Update inspired me to do more with Math and Plotting. (Warren recently passed away). Warren always preceed his article with a comment, "--if you publish this one I'll send another". His articles were short, to the point, and useful.

Then there was Roelof Mulder who gave us an excellent extension of the Oliger DOS. This was the nucleus for Bob Hartung's "DOSDEX" series of Disk Utilities (and issue disk). Then there are Bob Mitchell and George Chambers who have produced a whole library of LKDOS utilities and shared them via the Toronto disk library. There are many others who could be mentioned. Some just gave ideas and others complete programs. I'll wrap up this philosophical set of epistles with a call for everyone to PARTICIPATE. Tell us "your way" of getting the most from your computer. Send your articles, short or long, to Update Magazine. BJ_

(cont)

```
  2 REM "READ DATA RESTORE"
  5 LET x=97
  8 REM : RESTORE 80
 10 FOR n=65 TO 90
 20 RESTORE 70
 30 READ x
 40 PRINT CHR$ n;" ";CHR$ x
 50 LET x=x+1: NEXT n
 70 DATA x
 80 DATA 97,98,99,100,101,102,10
3,104,105,106,107,108,109,110,111
,112,113,114,115,116,117,118,119,
120,121,122
 90 STOP
```


Put some **punch** in your
PRINT FACTORY© graphics!!

Collection#1

Miscellaneous
Men/Boys
Women/Girls
Digitized Misc.

Collection#2

Animals
Funny
Sports
Transportation
Computers
Food
Holidays
Xmas

Over 150 large & small graphics in each collection!

Only $12.95 ppd. each or both collections for $19.95 ppd. [Check or money order.]
Available on tape or 5 1/4 DSDD LARKEN or OLIGER disk - please specify.
Send order to:
John McMichael, 1710 Palmer Dr., Laramie, WY 82070

CUSTOMIZED 2-COLUMN TASWORD PRINTOUTS

The following revisions to the listing for two-column printouts of Tasword files will create a customized routine to do up to 33 double-wide characters as a centered page header followed by a 64-character line for the author's name and address (line 9712). A CHR$ 136 graphic character ■ as the first character in any line will cause that line to be in double-wide font for sub-titles. Elite (12 c.p.i.) mode is assumed, with a left margin pre-set at 7, and column-width to 40 (line 9705). Header centering must be adjusted in the Tasword file itself.

A blank line must be inserted in the text file ahead of the first line that prints out as the right-hand column. This is not necessary if the heading is printed first in regular Tasword mode and then the first line of text is selected as the starting point for printing from the routine. Change lines per page at line 9709 (+18 for 1/8" LF).

Lines 9700-1 and printer codes in lines 9704, 9712, 9730, 9745 assume Tom Woods' ProFile printer driver has been installed in a 121-byte line 9999 REM statement. If you are using an Oliger or other printer driver, or if your printer does not use Epson codes, revise these lines accordingly, EG: LET / p=o: POKE 23300, 60: POKE 23301,3: LPRINT CHR$ 27; "W1"; etc. Include the line 9700 LF definition.

Omit lines 10-70 and GO TO line 9700 from main Tasword menu if merged with abbreviated Tasword listing. Use keywords in prompts wherever possible to conserve memory. If a$="c" upon exit from Tasword menu then the printer-set in lines 9702-4 will return to the menu, as will any BREAK or error during printout.

-- Bob Hartung

```
  20 CLEAR VAL "33000"
  30 ON ERR RESET
  40 INPUT "LOAD tasfile - f"'"Do LPRINT
    - d ";a$
  50 IF a$="f" THEN INPUT "File name: ";
a$: LOAD /a$CODE
  60 IF a$="d" THEN GO TO VAL "9700"
  70 GO TO VAL "40"
9700 LET LF=VAL "6": LET b=VAL "PEEK 236
27+PEEK 23628*256-121": LET i=VAL "INT (
b/256)": LET j=VAL "b-i*256"
9701 CLS : POKE VAL "26703",j: POKE VAL
"26704",i: LET o=NOT PI: LET I=SGN PI
9702 ON ERR RESET : LPRINT "↑1B2";: INPU
T "ENTER skips printer-set ";d$: IF d$="
" THEN GO TO VAL "9705"
9703 LET d$="": INPUT "Prtr CODE -1 TO S
TOP ";b: IF b<>-I THEN LET d$=d$+CHR$ b:
 PRINT b;" ";: GO TO VAL "9703"
9704 LPRINT d$;: INPUT "1/6 OR 1/8: ";LF
: LPRINT ("↑1B0" AND LF=VAL "8");: IF a$
="c" THEN LPRINT : GO TO VAL "22"
9705 LET LM=VAL "7": LET  cols=VAL "40":
 DIM d$(VAL "16")
9706 INPUT "1st LINE TO PRINT ";ln1: LET
 ln1=ln1-I: LET tasfile=VAL "ln1*64+3328
0": LET b=I: LET ct=I
9709 ON ERR GO TO VAL "9800": LET pgline
s=VAL "58"+VAL "18*(LF=8)"
9710 FOR N=tasfile TO VAL "52480" STEP V
AL "64"
9711 LET x=VAL "0+(PEEK N=136)": LET j0=
N+cols-I-VAL "19*x": PRINT AT INT PI,o;
9712 IF ct<INT PI AND NOT ln1 THEN LPRIN
T d$+("↑0E" AND ct=I);: FOR J=N+I*(ct=I)
 TO N+VAL "33+30*(ct=I+I)": LPRINT CHR$
PEEK J;: NEXT J: LET ct=ct+I: LPRINT : N
EXT N
9730 LPRINT d$( TO LM)+("↑1BW1" AND x);
9735 FOR J=N TO j0
9740 IF PEEK j<VAL "128" THEN PRINT CHR$
 PEEK J;: LPRINT CHR$ PEEK J;
9741 NEXT J
9743 LET cols2=N+pglines*VAL "64"
9744 LET j0= cols+cols2-VAL "20*(PEEK co
ls2=136)"
9745 LPRINT ("↑1BW0" AND x)+"    "+("↑0E"
 AND PEEK cols2=VAL "136");
9746 PRINT AT INT (PI*PI),o;
9747 FOR j=cols2 TO j0
9749 IF PEEK j<VAL "128" THEN PRINT CHR$
 PEEK j;: LPRINT CHR$ PEEK j;
9750 NEXT j
9751 LPRINT
9755 INPUT "": PRINT #o;AT I+I,o;" BREAK
 TO STOP LPRINT ";pglines;" LINE ";ct
9762 IF ct=pglines THEN LET ct=I: LET N=
cols2+I: GO TO VAL "9900"
9765 LET ct=ct+I
9770 NEXT N
9800 PRINT FLASH I'" STOP LPRINT ": PAUS
E VAL "100": LPRINT : GO TO VAL "20"
9900 LET b=b+I: INPUT "Insert PAGE ";(b)
;b$
9920 GO TO VAL "9770"
9999 REM Create 121-byte REM line to sto
re printer code here.
```

Mr. Frank Davis
513 E. Main St.
Peru, IN 46970

Dear Frank,

Supplying all code corrections is not possible because of attrition, nevertheless, I am enclosing some of what I can reconstruct at this time. Some "corrections" are unique to my system, and do not apply (like my EXROM DOS).

While I was developing corrections, it became clear that I was doing salvage work -- repairing sabotage in effect. I am sure you can see how obvious this becomes once repairs have been started. Knowing what NOT to believe made figuring out what to do easier.

I am only human. I don't remember what I wound up with in my core memory. It just grew. A brief summary is some help, along with data from my book. The picture of EXROM code there (showing censorship), will help to explain what happened to those routines maintaining OPEN # and structures supporting SELECT, OPEN, & CLOSE in RAM.

The restored EXROM code is fairly simple except for SYTAX checking of passed parameters. There is an image of the default table configuration to be copied below SYSCON.

What I am sending you fixes almost all the damage in HOME ROM. I sent Bob Orrfeldt my reconstruction of lower EXROM but lost my copy. It allowed RST calls to replace more complex bank switching instructions in tape routines, saving lots of memory space and eliminating the NMI conflict with LKDOS and others.

You will see that PASSING is restored to HOME bank where it belongs.

Corrections to initialization code in EXROM are pretty simple, though tricky because of good camouflage and snow-job.

Corrections to memory remapping code consist mainly in removing dependence on VIDMOD, redefining it as CONFIG. It is also necessary to account for nonstandard UDG banks. The corresponding FIX table needs extensive updating and the DISPATCH jump table needs the same.

The bank switching services image in EXROM is unusable as it stands. Adequate changes are highly difficult to explain, so some clarification is in order.

The main difficulty with bank switching is to provide a common program access site to all banks. TIMEX use of chunk 3 or 7 conditiionally is a clumsy, but usable convention for simpler systems. This still leaves a problem when transferring bytes from one bank to another. TIMEX uses the stack repeatedly to do this, but using a block of RAM in I/O
space is much safer and more efficient. It is also a better place to store the image of bank switching code.

More attention to I/O space leads to a configuration which includes these features, and at the same time makes PC compatibilty possible for clone cards.

Obviously, these are my designs which don't carry much weight. In spite of this, there are some bank switching code corrections to account for sabotage which should precede any consideration of changes. I have some of this not previously published, and will send it along soon.

Except for barrier corrections, all low level code revisions are to WRITE_BS_REG and READ_BS_REG. This is the only code which directly interfaces to the bank switching controller. The TIMEX version never existed in workable form, so I invented and recommend, my CCOT system in one of its three levels.

Level 1 adds memory beyond 64K contiguously.

Level 1 adds memory beyond 64K contiguously.

Level 2 adds memory beyond 64K in any configuration mappable in RAM.

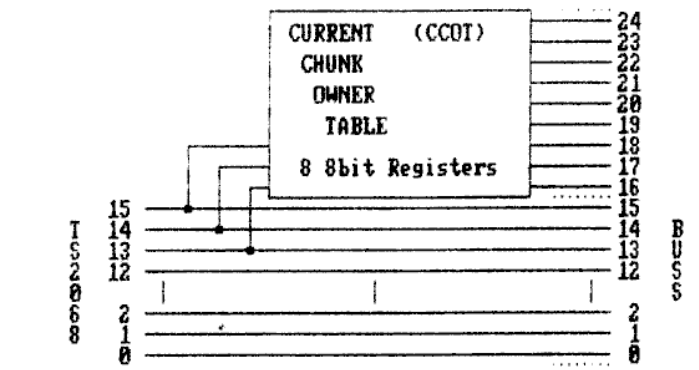
Level 3 conforms to auto-configuration as provided in EXROM for TIMEX style devices.

Respectfully yours,

William J. Pedersen
1120 merrifield S.E.
Grand Rapids, MI 49507

MODEL 1: Each BANK is 64k on 64k boundaries. A total of 256 BANKS can be defined. Each of 8 CHUNKS can be filled from any of these banks in any order. All 16 TS2068 address bits are required to specify a location within a selected BANK. The planned TS2068 method distributed the owner registers to each expansion bank, making multiple ownership a problem solved by programming convention.

There are conceptual problems with this method, but to most users, it is convenient to associate a DEVICE with a BANK. DEVICES cannot be reassigned to other CHUNKS.

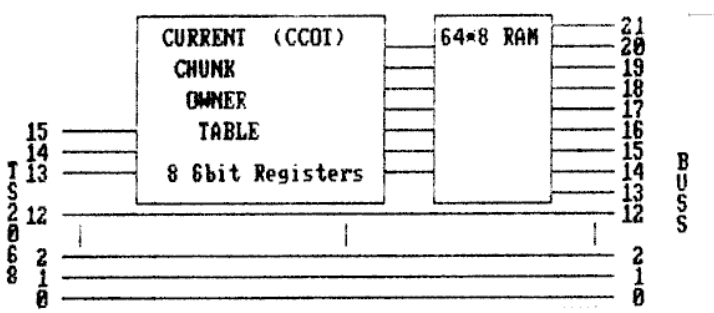


Representative Memory Map

MODEL 2: 8 out of 64 "handles" can be assigned. Each handle accesses a pointer stored in RAM. 64 pointers are available, though only eight are current at any time.

There is enough room in RAM, and enough handles to contain and select multiple memory maps for multitasking, and multiuser network operation. This arrangement covers memory sizes up to 2M, but is obviously easily expanded. A pointer accesses an 8K segment on 8K boundaries.

In effect, CHUNKS are being manipulated instead of BANKS.



Representative Memory Map

INTERRUPTS & RST CALLS:

These events have default entry points in the code which can vary depending on the current mode of interrupts. Except under unusual conditions, it can be assumed that only modes 1 and 2 will be used for interrupts. This means that addresses 0, 8, 16, 24, 32, 40, 56 and 102 must be managed in every bank. Some banks will not use some of the RST calls, nevertheless, it is wise to account for future use of all these addresses. Current EXROM is very deficient in this respect.

NMI BARRIERS

This is **defective** ROM code. It forces reinitialization (crash) unless a non-zero value is given to (NMIADD), in which case NMI will be ignored. In neither case is this the intended use.

```
102   NMI          F5        PUSH AF
103                E5        PUSH HL
104                2AB05C    LD HL,(NN)     23728  NMIADD        Get NMI handling routine address
107                7C        LD A,H
108                B5        OR L                                 Z if address = 0000h
109                2001      JR NZ,+3       112                   Skip if address <> 0000h
111                E9        JP (HL)                              Jump to 0000h. (Reinitialize)
112                E1        POP HL                               Here for address <> 0000h (Ignore)
113                F1        POP AF
114                ED45      RETN                                 Return from NMI
```

Below is the **intended** NMI code.

```
102   NMI          F5        PUSH AF
103                E5        PUSH HL
104                2AB05C    LD HL,(NN)     23728  NMIADD        Get NMI handling routine address
107                7C        LD A,H
108                B5        OR L                                 Z if address = 0000h
109                2801      JR Z,+3        112                   Ignore if no NMI routine. (0000h)
111                E9        JP (HL)                              Jump to routine. (AF,HL on STACK)
112                E1        POP HL                               Here for no routine.
113                F1        POP AF
114                ED45      RETN                                 Return from NMI
```

Below is the **intended** BS_NMI code in RAM. The actual code to be corrected lies in EXROM from where it is copied during initialization. This copy in CHUNK#3 is not directly accessed by an NMI signal, making it necessary to include a jump to 25351 @ 102 in every bank which shadows CHUNK#0, or have a complete copy there. Current EXROM does not include this provision. Tape routines start @ 104, which is ONE byte too low to allow three bytes for an NMI jump instruction. There is a way around this, using a relative jump to a long jump at a free location. An NMI processing routine **must** be accessible at all times, regardless of bank switching. A mandatory protocol **must** be followed.

```
25351 BS_NMI       F5        PUSH AF
25352              E5        PUSH HL
25353              2AB05C    LD HL,(NN)     23728  NMIADD        Get NMI handling routine address
25356              7C        LD A,H
25357              B5        OR L                                 Z if address = 0000h
25358              2801      JR Z,+3        25261                 Ignore if no NMI routine. (0000h)
25360              E9        JP (HL)                              Jump to routine. (AF,HL on STACK)
25361              E1        POP HL                               Here for no routine.
25362              F1        POP AF
25363              ED45      RETN                                 Return from NMI
```

MINOR ERROR...Wrong ERROR message.

```
1472               3E16      LD A,N         22                    No        * Value should be 21
1474               90        SUB B                                Row       * Eventually gives "Out of Screen" for row 22, but
1475  BAD_INT2     DA291F    JP C,NN        7977   BAD_INTEGER2            * doesn't catch it here. Wrong error message.
1478               3C        INC A                                23 to 1   * Passes A = 22 to 0
1479               47        LD B,A
1480               04        INC B                                24 to 2, standard format (2 is incorrect)
```

Corrected code

```
1472               3E15      LD A,N         21
1474               90        SUB B                                Row
1475  BAD_INT2     DA2918    JP C,NN        7977   BAD_INTEGER2            * Passes A = 21 to 0
1478               C603      ADD A,N        3                     24 to 3
1480               47        LD B,A                               24 to 3, standard format
```

MAJOR ERROR! Clobbers screen update/edit speed

```
1716  WR_S_P       79        LD A,C                               33 to 2  Here for special graphics
1717               3D        DEC A                                32 to 1, NZ NC
1718               3E21      LD A,N         33                                --\  ******* MAJOR ERRORS!!! ********
1720               200E      JR NZ,+16      1736   ..            Space left in row --/  * Wrong order & Jump location! *
1722               05        DEC B                                Need new row       !   This error causes IVFUL? to be called
1723               4F        LD C,A                                                  ; every character. This slows down all
1724               FDCB014E  BIT 1,(IY+1)   23611  FLAGS:PR      Output to printer? ! screen postings. It is especially bad
1728               2806      JR Z,+8        1736   ..            No                 ! for the lower screen because an EDIT line
```

```
1730              D5        PUSH DE                          Here for printer    ! must be re-evaluated whenever the cursor
1731              CD230A    CALL NN         2595   DUMPPR    Output to TS2040    ! moves, characters are added, or DELETE is
1734              D1        POP DE                                               ! being executed.  These 'errors' seem too
1735              79        LD A,C                           C:= A:= 33          ! obvious to be accidental.
1736  ..          B9        CP C                             Z is forced
1737              D5        PUSH DE
1738              CC9007    CALL Z,NN       1936   TVFUL?    Ask the boss
1741              D1        POP DE
```

Corrected code. The call to TVFUL? now occurs only after the last character on a screen line, as it should. The resulting code is six bytes shorter, as well.

```
1716  WR_S_P      79        LD A,C                           33 to 2
1717              3D        DEC A                            32 to 1, 0 if past right margin
1718              2016      JR NZ,+24       1742   ..        Room left for char
1720              3E21      LD A,N          33               Past right margin
1722              4F        LD C,A                           Left margin
1723              05        DEC B                            Next row
1724              FDCB014E  BIT 1,(IY+1)    23611  FLAGS:PR  Output to printer?
1728              D5        PUSH DE
1729              C4230A    CALL NZ,NN      2595   DUMPPR    Output to TS2040
1732              CD9007    CALL NN         1936   TVFUL?    Ask the boss
1735              D1        POP DE
```

```
1736              00000000  NOPs                             Can be closed up later
1740              0000      NOPs
```

SYSCON SEARCH MISDIRECTION

```
4719              7E        LD A,(HL)                        Get BANK#    ***ERROR HERE, WRONG ADDRESS***
4720              32BF5C    LD (NN),A       23743  CURCBN
4723              FDCB30A6  RES 4,(IY+48)   23658  FLAGS2:RETPOS
4727              23        INC HL                           -) SC(n,1)
```

Repaired code.

```
4719              23        INC HL                           -) SC(n,1)
4720              7E        LD A,(HL)                        Get BANK#
4721              32BF5C    LD (NN),A       23743  CURCBN
4724              FDCB30A6  RES 4,(IY+48)   23658  FLAGS2:RETPOS
```

CHANS Routines. See revision sheets. 5023-5344

SYNTWO Routines. See revision sheets. 9300-9730

```
4598              FE02      CP N            2                Is it a bus expansion channel? (Should be 1.)
4650              CDD065    CALL NN         26064  CALL_BANK
4751              CDD065    CALL NN         26064  CALL_BANK
6073              CD9964    CALL NN         25753  BANK_ENABLE
6091              CD9964    CALL NN         25753  BANK_ENABLE
6134              CD9964    CALL NN         25753  BANK_ENABLE
6158              CD9964    CALL NN         25753  BANK_ENABLE
6176              CD9964    CALL NN         25753  BANK_ENABLE
6233              CD9964    CALL NN         25753  BANK_ENABLE
6251              CD9964    CALL NN         25753  BANK_ENABLE
6297              CD2267    CALL NN         26402  XFER_BYTES    (NEEDS WORK)
6323              CD9964    CALL NN         25753  BANK_ENABLE
6391              CD9964    CALL NN         25753  BANK_ENABLE
6409              CD9964    CALL NN         25753  BANK_ENABLE
7395              CD9964    CALL NN         25753  BANK_ENABLE
7458              CD9964    CALL NN         25753  BANK_ENABLE
7610              CD9964    CALL NN         25753  BANK_ENABLE
7631              CD9964    CALL NN         25753  BANK_ENABLE
7655              CD9964    CALL NN         25753  BANK_ENABLE
7693              CD2267    CALL NN         26402  XFER_BYTES
7859              CD9964    CALL NN         25753  BANK_ENABLE
7869              CD9964    CALL NN         25753  BANK_ENABLE

For: CDD065    CALL NN        26064  CALL_BANK
Use: CD5625    CALL NN        9556   CALL_B

For: CD9964    CALL NN        25753  BANK_ENABLE
Use: CDE925    CALL NN        9705   B_ENABL
```

CLOSE SEARCH TABLE (IN RAM @ ORG1)

```
Addr Test      Byte     Target
   0   48  'K'   23      23  DDCL1 (OPTIONAL)
   2   53  'S'   21      23  DDCL1 (OPTIONAL)
   4   50  'P'   19      23  DDCL1 (OPTIONAL)
   6   00        19      25  DDCL2
   8   00        20      28  DDCL3
  10   00        21      31  DDCL4
  12   00        22      34  DDCL5
  14   00        23      37  DDCL6
  16   00        24      40  DDCL7
  18   00        25      43  DDCL8
  20   00        26      46  DDCL9
  22   00  EOT
  23 DDCL1        POP HL          (OPTIONAL)
  24              RET             (OPTIONAL)
  25 DDCL2        JP NN
  28 DDCL3        JP NN
  31 DDCL4        JP NN
  34 DDCL5        JP NN
  37 DDCL6        JP NN
  40 DDCL7        JP NN
  43 DDCL8        JP NN
  46 DDCL9        JP NN
```

OPEN SEARCH TABLE (IN RAM @ ORG2)

```
Addr  Test      Byte  Target
   0  48  'K'   17     23  DEV_K
   2  53  'S'   1B     27  DEV_S
   4  50  'P'   1F     31  DEV_P
   6            23     35    2
   8            27     39    3
  10            2B     43    4
  12            2F     47    5
  14            33     51    6
  16            37     55    7
  18            3B     59    8
  20            3F     63    9
  22  00  EOT

 23  DEV_K       1E01      LD E,N        1
 25              1806      JR +42        67     ..
 27  DEV_S       1E06      LD E,N        6
 29              1802      JR +38        67     ..
 31  DEV_P       1E10      LD E,N        16
 33                        JR +34        67     ..
 35  DEV_2       1E10      LD E,N        21
 37                        JR +30        67     ..
 39  DEV_3       1E10      LD E,N        26
 41                        JR +26        67     ..
 43  DEV_4       1E10      LD E,N        31
 45                        JR +22        67     ..
 47  DEV_5       1E10      LD E,N        36
 49                        JR +18        67     ..
 51  DEV_6       1E10      LD E,N        41
 53                        JR +14        67     ..
 55  DEV_7       1E10      LD E,N        46
 57                        JR +10        67     ..
 59  DEV_9       1E10      LD E,N        51
 61                        JR +6         67     ..
 63  DEV_9       1E10      LD E,N        56
 67                        JR +2
 68              78        LD A,B
 69              B1        OR C
 70              C27014    JP NZ,NN      5232   BAD_FILNAM
 73              57        LD D,A                Restore msb. (= 0)
 74              E1        POP HL
 75              C9        RET                   DE = OFFSET+1
```

CHANS Revised

```
     [SERVICE CODE 44]  SYNTAX: CLOSE # N,'x'(END)
5023 CLOSE       CD0814    CALL NN        5128   OFFSET    BC = Offset+1 for CHANS, Offset+32768 for SYSCON
5026             78        LD A,B
5027             B1        OR C                            0 if CLOSED
5028             C8        RET Z                           Channel already CLOSED. No error.
5029             CDBE13    CALL NN        5054   CLCHAN    Channel OPEN. Needs action.
5032 RSTSTR      010000    LD BC,NN       0               Releases STRMNO, or restores default channel.
5035             11E2A3    LD DE,NN       41954
5038             EB        EX DE,HL
5039             19        ADD HL,DE
5040             3807      JR C,+9        5049   CH_0      STRM# 4-15
5042             01CF11    LD BC,NN       4559            Here if STRM# 0-3. SMINIT
5045             09        ADD HL,BC
5046             4E        LD C,(HL)
5047             23        INC HL
5048             46        LD B,(HL)                       BC = Default value
5049 CH_0        EB        EX DE,HL                        Here if STRM# 4-15,BC=0.
5050             71        LD (HL),C
5051             23        INC HL
5052             70        LD (HL),B                       Post reset value, 0, or default
5053             C9        RET
     [SERVICE CODE 45]
5054 CLCHAN      E5        PUSH HL                         Here if channel OPEN.
5055             78        LD A,B
5056             FE80      CP N           128              Test FLAG
5058             3018      JR NC,+26      5084   CL_SC     EXPANSION BANKS
5060             2A4F5C    LD HL,(NN)     23631  CHANS     Here for LOCAL CHANNELS
5063             09        ADD HL,BC                       -) CH(n,1)
5064             23        INC HL                          -) CH(n,2)  INPUT Routine
5065             23        INC HL                          -) CH(n,3)
5066             23        INC HL                          -) CH(n,4)  DEVICE CHAR
5067             4E        LD C,(HL)                       Get DEVICE CHAR (Might be new from an OPEN)
5068             EB        EX DE,HL
5069             21xxxx    LD HL,NN       xxxxx  CL_FAN    CLOSE SEARCH TABLE base (in RAM with EOT)
5072             CD6B13    CALL NN        4971   SEARCH
5075             3802      JR C,+4        5079   CH_1      Device  char found
5077             E1        POP HL                          No CLOSE routine for device. (System error ignored)
5078             C9        RET
     Note that an empty CLOSE table will not cause a crash.  Devices requiring DDCLs must appear.
5079 CH_1        4E        LD C,(HL)                       Get FAN byte
5080             0600      LD B,N         0
5082             09        ADD HL,BC                       -) Device Dependent CLOSE routine for device
5083             E9        JP (HL)                         Do it

5084 CL_SC       D680      SUB N          128              Strip FLAG, Here for EXPANSION CHANNELS
5086             47        LD B,A
5087             2ABC5C    LD HL,(NN)     23740  SYSCON
5090             09        ADD HL,BC                       -)SC(n,0)
5091             7E        LD A,(HL)                       Get status
5092             FE00      CP N           0
5094             C8        RET Z                           If inactive
5095             FE80      CP N           128
5097             C8        RET Z                           EOT  Z
5098             23        INC HL                          -)SC(n,1)
5099             46        LD B,(HL)                       Get BANK#
5100             23        INC HL                          -)SC(n,2)  DEVICE CHAR
5101             23        INC HL                          -)SC(n,3)  OPEN Routine  lsb
5102             23        INC HL                          -)SC(n,4)                msb
5103             23        INC HL                          -)SC(n,5)  CLOSE Routine lsb
5104             5E        LD E,(HL)
5105             23        INC HL                          -)SC(n,6)                msb
5106             56        LD D,(HL)
5107             62        LD H,D
5108             6B        LD L,E                          HL -) CLOSE Routine
5109             3ACB5C    LD A,(NN)      23755  STRMNM
5112             5F        LD E,A
5113             1600      LD D,N         0
5115             D5        PUSH DE                         PARM = 0, STRM#
5116             E5        PUSH HL                         Target = CLOSE Routine
5117             C5        PUSH BC                         Bank#,HS
5118             010200    LD BC,NN       2
5121             C5        PUSH BC                         PARMS Passed
5122             010000    LD BC,NN       0
5125             C37824    JP NN          9336   TW_X
```

```
5128  OFFSET       CD1E1F    CALL NN         7966   FIX_U1     This routine gets FLAG,OFFSET from the STRMS TABLE.
5131               32CB5C    LD (NN),A       23755  STRMNM
5135               FE10      CP N            16
5137               3802      JR C,+4         5141   CH_2
5139  BAD_STRM2    CF        RST 8           8      ERROR
5140               17        DC              Invalid stream

5141  CH_2         C603      ADD A,N         3  -3 to +15 -) 0 to 18
5143               07        RLCA            Times 2
5144               21105C    LD HL,NN        23568  STRMS
5147               4F        LD C,A
5148               0600      LD B,N          0
5150               09        ADD HL,BC       -) channel select data lsb
5151               4E        LD C,(HL)
5152               23        INC HL          -) channel select data msb
5153               46        LD B,(HL)       BC = channel select data
5154               2B        DEC HL          -) channel select data lsb
5155               C9        RET
     [SERVICE CODE 46]  SYNTAX: OPEN # N,"x"[,PARMLIST](END)
5156  OPEN         FE2C      CP N            44:,:
5158               2805      JR Z,+7         5165   CH_3       PARM LIST implied by comma
5160               CD441B    CALL NN         6980   END?
5163               180B      JR +13          5176   CH_4       No PARM LIST

5165  CH_3         CD8928    CALL NN         10377  INTPT?     Here if PARM LIST
5168               2006      JR NZ,+8        5176   CH_4
5170               CD6925    CALL NN         9577   SKIPIT     Ignore SYNTAX of LIST
5173               CD441B    CALL NN         6980   END?
5176  CH_4         EF        RST 40          40     CALCTR
5177               01        EXCH:
5178               38        QUIT:
5179               CD0814    CALL NN         5128   OFFSET     Channel select data in BC
5182               78        LD A,B
5183               B1        OR C
5184               2816      JR Z,+24        5208   CH_5       Not OPEN, OK to proceed
5186               FE80      CP N            128                Is already OPEN. Needs checking.
5188               38CD      JR NC,-49       5139   BAD_STRM2  Expansion bank
5190               2A4F5C    LD HL,(NN)      23631  CHANS      Here for LOCAL channels.
5193               09        ADD HL,BC
5194               23        INC HL
5195               23        INC HL
5196               23        INC HL
5197               7E        LD A,(HL)                          Get Current CHANS DEVICE CHAR
5198               EB        EX DE,HL
5199               FE4B      CP N            75:K:
5201               2808      JR Z,+10        5211   CH_5
5203               FE53      CP N            83:S:
5205               2804      JR Z,+6         5211   CH_5
5207               FE50      CP N            80:P:
5209               20B8      JR NZ,-70       5139   BAD_STRM2  Must close open local channels first unless K,S,P.
5211  CH_5         CD6814    CALL NN         5218   OPCHAN     K, S, & P can be overruled locally
5214               73        LD (HL),E
5215               23        INC HL
5216               72        LD (HL),D
5217               C9        RET
     [SERVICE CODE 47]
5218  OPCHAN       E5        PUSH HL
5219               CDAF2F    CALL NN         12207  POPSTR     Get DEVICE CHAR, LEN
5222               0B        DEC BC
5223               78        LD A,B
5224               B1        OR C                               0 if single char
5225               2802      JR Z,+4         5229   CH_6
5227  BAD_I/O_DEV  CF        RST 8           8      ERROR
5228               12        DC              Invalid I/O device

5229  CH_6         03        INC BC
5230               C5        PUSH BC
5231               1A        LD A,(DE)
5232               E6DF      AND N           223:11011111:      Force to caps
5234               4F        LD C,A
5235               21xxxx    LD HL,NN        xxxxx  OPCHAN_FAN (In RAM)
5238               CD6B13    CALL NN         4971   SEARCH
5241               3006      JR NC,+8        5249   OPENSC     Not LOCAL, try SYSCON
5243               4E        LD C,(HL)                          Here if LOCAL CHANNEL
5244               0600      LD B,N          0
5246               09        ADD HL,BC
5247               C1        POP BC
5248               E9        JP (HL)
```

```
5249  OPENSC      CD7413    CALL NN       4980   SRCHSC     Is it here?
5252              303A      JR NC,+60     5312   INSTALL    No. Consult EXROM.
5254              C1        POP BC                          Found it.
5255              0B        DEC BC
5256              78        LD A,B
5257              B1        OR C                            0 if not OPEN
5258              20D8      JR NZ,-35     5230   BAD_I/O_DEV
5260              D5        PUSH DE
5261              EB        EX DE,HL
5262              CDA225    CALL NN       9634   PASSING    PARM LIST to stack.
5265              EB        EX DE,HL
5266              46        LD B,(HL)                       -) SC(n,1)  Get BANK#
5267              0E88      LD C,N        136
5269              23        INC HL                          -) SC(n,2)  DEVICE CHAR/RAM MASK
5270              23        INC HL                          -) SC(n,3)  OPEN Routine lsb
5271              5E        LD E,(HL)
5272              23        INC HL                          -) SC(n,4)              msb
5273              56        LD D,(HL)
5274              62        LD H,D
5275              6B        LD L,E                          HL -) OPEN Routine
5276              3AC85C    LD A,(NN)     23755  STRMNM
5279              5F        LD E,A
5280              1600      LD D,N        0
5282              D5        PUSH DE                         PARM = 0, STRM#
5283              E5        PUSH HL                         Target = OPEN Routine
5284              C5        PUSH BC                         BANK#, HS
5285              2A655C    LD HL,(NN)    23653  STKEND
5288              4E        LD C,(HL)                       Get PARM LIST byte count
5289              2B        DEC HL
5290              22655C    LD (NN),HL    23653  STKEND     Adjust CALC stack
5293              0600      LD B,N        0
5295              03        INC BC
5296              03        INC BC                          Add 2 for BANK# and C
5297              C5        PUSH BC                         PARM Passed
5298              010000    LD BC,NN      0
5301              C5        PUSH BC                         PARM Ret'd
5302              CD5625    CALL NN       9558   CALL_B
5305              D1        POP DE
5306              7A        LD A,D
5307              C680      ADD A,N       128             Restore flag to DE
5309              57        LD D,A
5310              E1        POP HL
5311              C9        RET

5312  INSTALL     EB        EX DE,HL
5313              CDA225    CALL NN       9634   PASSING    PARM LIST to stack.
5316              EB        EX DE,HL
5317              21xxxx    LD HL,NN      xxxx   XOPEN      (EXROM)
5318              01FEFE    LD BC,NN      65278             EXROM, CHUNK 0
5321              18D2      JR -44        5276              Jump to EXROM OPEN routines

5323-5343 21 Bytes FREE
```

OPEN SYNTAX is checked as needed. Operations depend on previous actions. Default tables may have been expandec to include new devices. Any existing device which is currently CLOSED can be OPENED. An existing LOCAL device must meet at least the same data requirements as K, S, P -- that is: OUTPUT routine addr, INPUT routine addr, DEVICE CHAR. It may also include mapping data and floppy buffer(s).

OPEN statements with PARMLISTS provide or modify this information. Actually, all OPEN statements pass the STREAMNM to the service routine, though not part of the SYNTAX.

OPEN statements without PARMLISTS which find the stream already OPEN require special attention. If the stream device character matches that requested, nothing happens and no error need be reported. If they do not match, only the default devices K, S, & P are permitted to be overwritten.

To install a new device requires processing a PARMLIST. An OPEN statement of this type is handled by routines in EXROM.

To modify an expansion bank device is dependent on the device itself. Information is supplied (often incomplete) and the bank OPEN routine must handle SYNTAX.

It is suggested that floppy drives be given device characters which are integers; 1, 2, 3 etc. This corresponds to CHANS information blocks larger than the standard five bytes. Following this with the excess block size allows CHANS to be parsed and displayed if wanted.

No new features have been added. The CLOSE & OPEN tables have been relocatred to RAM, where they can be edited and expanded as needed. Initial values are copied from EXROM the same as DISPATCH. They are located just under SYSCON.

Replacing censored OPEN routines in EXROM can be expanded on. EXROM has plenty of address space for DOS routines CAT, FORMAT, MOVE, & ERASE as originally intended. Existing DOS versions can temporarily be adapted to run in EXROM, but sticking t the original plan, using IBM compatible disk organization, is preferred. This makes adding hard disk operation simpler too.

CABLE COLUMN

By Bill Cable

ARCHIVE SERIES
PART 4 : CREATE, OPEN, INSERT COMMANDS

We continue our exploration of PSION's ARCHIVE Database System. This is an open ended series with each column focusing on some aspect of ARCHIVE. I hope it helps aspiring achivists get over those inevitable stumbling blocks. Knowledge gained will be a springboard for using any database on any computer. Have past Cable Columns and your QL Manual handy for quick reference. In the last issue we covered the QUIT, LOOK, CLOSE, DISPLAY, FIRST, LAST, NEXT, BACK commands in some detail and used them on the GAZET_DBF database provided with ARCHIVE. In this issue we want to discuss the CREATE command which allows you create your own databases and the OPEN and INSERT commands which are used to add new information to a database. As an example we will create a library index database for keeping track of books.

First I want to quickly rehash what an ARCHIVE database is. Each database is like a set of file cards that are called records. Each card/record has the same layout for holding the information to be kept in the database. Specific kinds of information are put in specific locations in the record. These are called the fields of the record. ARCHIVE provides us with powerful record/field oriented commands and a flexible language for constructing more. The time and effort saved using these commands justifies the work necessary to learn how to use ARCHIVE and put data in this structured form. Don't be intimidated, the concepts used in database work are based on common sense. You only need to become familiar with them.

PREPARING TO CREATE A DATABASE

When we create a database with ARCHIVE it is equivalent to giving the information necessary to create a box of labeled index cards with the various locations on the cards set up for the particular kinds of information we want to keep. We have to provide the following information:

1. What will we call our database (database name). ARCHIVE database names can be up to 8 characters long, starting with a-z,A-Z then can include 0-9. A default 3 character extension of 'dbf' will be given if you don't specify another. ARCHIVE does not make the database name part of the database so you can use the SUPERBASIC RENAME command to change a database name.

2. How many distinct kinds of information do we want in each record (how many fields). I can't find documentation giving the maximum number of fields ARCHIVE allows. I know it's more than 140. Probably the maximum is 255. Most databases I work with have 20-40 fields. Whether to give a certain kind of information its own field rather than combine it in a more general purpose field depends partly on whether you will ever want to order or do quick lookups of that information (ORDER and LOCATE commands).

3. What do we want to call each field (field names). Field names must start with a-z,A-Z then can also include 0-9 and _. The maximum length is 13 characters. Usually it is best to choose a descriptive name corresponding to what type of information the field will hold.

4. What is the type for each field (field type). In ARCHIVE this means text type or numeric type. If the field name ends in '$' then it is a text field otherwise it is a floating point numeric field. A text field can hold up to 255 characters of information and numeric fields hold numbers of 14 digit accuracy.

5. In what order do we want the fields in the record (field number). The order is the same as the order they are defined when creating the database. It affects the order fields are prompted for when using the ALTER and INSERT commands.

This is the information we have to supply when we execute the CREATE command. Once we create our database we cannot change any of these field properties (database name can change). It's like we printed our card forms and we have to stick with them. What actually happens is that ARCHIVE creates a database file conforming to the field specifications we give. It is empty until we add some information but the field structure has been permanently defined. Forgetting to put in fields that we later want is one of the most common problems encountered with databases. Fortunately, there are ways around this problem. They involve creating a new database with the new field structure and copying the old database information to the new database. Still, it is best to give some thought to what fields will be needed. One nice feature of ARCHIVE is that you don't waste much disk space if you don't put information in fields. This means you don't pay a high price for having lots of fields. With most database systems when you create a database you also have to specify a maximum length for each text field and each record has to reserve that maximum length for each field. ARCHIVE gives each text field the option to be 0 to 255 characters long and only reserves the space used.

Each field should correspond to some important general class of information pertaining to the subject area covered by the database. A library index database would need to have a field for book title. By having that information in its own field you can order by it, select on it, and do fast lookups of it. Author's name would be another piece of information you would want to put in its own field. Name is a complicated piece of information because it is actually made up of a last name and a first name. A large database might have many name duplications and you have to have a way to deal with such problems. Sometimes you have to

have fields for a general group of items and more than one item might be entered at the same time. We could have a field for main topics of a book. If a book covered more than one topic you could enter each and separate them by commas. With ARCHIVE you could still select particular topics. You would not be able to sensibly order by the topic field because it could contains multiple entries. Also you must always be careful to be consistent in how you spell and abreviate your entries if you ever want to select, order, or search them.

Let's see what we need to create our library index database. We need a name for our database plus the following fields would be useful:

1. Book title
2. Book author (last name,first)
3. Book publisher
4. Book isbn number (international book code)
5. Type of book(like novel,poetry,computing,etc)
6. Main topics of book
7. Comments about book
8. Year of book publication
9. Pages in book

So we will have these 9 fields in our library index database. I will use the following names for field names : title$, author$, publisher$, isbn$, type$, topics$, comment$, year, pages. Note that all are text type (end in $) except year and pages which are numeric type. Lets call our database 'mybooks'. What you should type will be underlined.

CREATE COMMAND

Start ARCHIVE. The last Cable Column gives details. You have ARCHIVE in its user friendly mode with the Help boxes at the top of the screen and the ARCHIVE cursor '>' at the bottom of the screen. Put a formatted microdrive in mdv2_ or other desired device. Type the following:

create<ENTER> (activate command)
mdv2_mybooks<ENTER> (database location & name)
title$<ENTER> (first field definition)
author$<ENTER> (second field)
publisher$<ENTER>
isbn$<ENTER>
type$<ENTER>
topics$<ENTER>
comment$<ENTER>
year<ENTER>
pages<ENTER> (ninth field)
<ENTER> (end create command)

We have now created our database. It is in the file 'mdv2_mybooks_dbf' and that file is currently in the OPEN state. We could insert information right now but let's close it and reopen it below. It will have the field structure we just defined but will have no records.

close<ENTER>

OPEN COMMAND

In order to add new records to a database we have to access it using the OPEN command. As mentioned previously it is extremely important to make sure you use the CLOSE and QUIT commands if you have opened a database. Let's open our newly created database so we can use the INSERT command to add new information. After we open it we will use the DISPLAY command so we can see its fields. Type:

open<ENTER>
mdv2_mybooks<ENTER>
display<ENTER>

INSERT COMMAND

We use this command to add new records to our database. First we need to have it opened. When we are inserting records the <ENTER>,<TAB>, and <SHIFT-TAB> move to the different fields and the <F5> enters record as displayed and <F4> exits from entering. It is important to become comfortable with these particular key combinations because they are the ones used in both inserting and altering records in ARCHIVE. Also the arrow keys and <CTRL> arrows are used in editing the text in fields. Let's insert a book:

insert<ENTER>
QL SuperBasic The Definitive Handbook<ENTER>
Jones,Jan<ENTER>
McGraw Hill<ENTER>
0-07-084784-3<ENTER>
computing<ENTER>
ql,programming,superbasic<ENTER>
best book on superbasic<ENTER>
1985<ENTER>
257<F5> (or 257<ENTER>)
<F4>

Now we could continue to enter more but we will stop and you can carry on by yourself.

CLOSE<ENTER>

Next issue we will cover ALTER, DELETE and more. Until then HAPPY ARCHIVING

A $99.00 SPECIAL FOR THOSE WHO WORK WITH BOTH QLs AND PCs

PSION's PC-FOUR : QUILL, ABACUS, EASEL, ARCHIVE for the PC with manual and tutor disk
Plus both the **QL** and **PC** versions of my **DBEasy** program included free on 5.25" or 3.5"

DBEasy is my ARCHIVE front-end program for painless database work

Order from : Wood and Wind Computing, RR3 Box 92, Cornish, NH 03745 603-675-2218

MECHANICAL AFFINITY CATALOG

The following are now available from Mechanical Affinity for your Sinclair home or business computer. All items listed are available in quantity. Orders may be placed by check or money order to either Paul Holmgren,5231 Wilton Wood Ct., Indianapolis In, 46254 317-291-6002 , ...or to Frank Davis, 513 East Main St., Peru, In 46970 317-473-8031. Do not make the check out to Mechanical Affinity. All Prices include Postage already!

BOOKS

SYNCWARE NEWS Vol. 1 $8 All volume 1 issues bound in one book
TOURING THE TS2068 ROM OPERATING SYSTEM by WIDJUP $15
QL TECHNICAL GUIDE $15

SERVICES and PARTS

QL Internal ROM board- this allows you to put your favorite ROM version (JM, JS, JSU, MGUS, MGUK, etc.) on an eprom. This will lower power consumption by the QL by about 20% & drop the internal heat by close to 50 degrees fahrenheit. There is also room on the eprom for us to include one of the following programs if you are an owner of one of them: ICE, QFLASH, TKII, SPEED SCREEN, TKIII. Brd & eprom $40 -- Board alone $15 -- Custom eprom alone $25. Let us know which ROM version you want us to supply, or you can supply.

Speedscreen supplied on your ROM or for ROMport $25. For ROMport you need to have CARE eprom brd or similar plug in brd.

Internal battery backed clock for QL, uses lithium battery, so should be good for far longer than ordinary batteries. This plugs in where the 8032 goes, and the 8032 is then installed in it. $20 for brd & battery, or $26 installed.

Replacement or backup power supply for the QL, no serious user should be without one (personal opinion). $15

QL case, contains keys and bare motherboard, no microdrives. Can be used to replace bad case, keytops, or bad motherboard, or even as a start on building your own spare QL. $20

Keytops for QL $7.50 Use to replace broken or missing keys, or the whole set, if need be. These are originals.

Micro Drive Cartridges $5 each, till supply improves for ones with the tab. $4.00 without the tab, each.

MDV labels, 3 sheets for $1.25. For the QL.

QL membranes, from Paul for $15.

TS2068 dock eprom boards, bare $10.00. These can be used for a TS2068 program on an eprom or can be configured to use for Non-Volatile memory boards (32K to 128K), or as RAM Disk.

Tom Bent's improved 8K TS1000 ROM on eprom. $10.00 Requires at least 16K RAM expansion to operate, but bug corrected. $12 if we supply the special socket.

Disk Drives, half height 3 1/2 and 5 1/4. Order from Paul at $55 @ for 3 1/2 or 5 1/4, or $165 for dual 3 1/2's w/ case & power.

Spectrum B ROMs, on eprom,bug corrected w/ additional characters set on the eprom for $10.

We can supply for those who are owners of the tape programs the following programs on eprom: ZXLR8 for the TS1000, PROFILE for TS2068, MSCRIPT, HOT-Z AROS for TS2068, MTERM II for the TS2068 and DELPHI UTILITIES for the TS1000. $10 for the eprom.

HOW TO DO DO IN TK2

Bob Hartung, 2416 N. County Line Rd. E., Huntertown, IN 46748

While the TOOLKIT II (TK2) manual is not exactly a shining example of casual reading material, it does give springboards for ideas on using this powerful extension to QL SuperBasic commands. If you have not already done so, put the scotia-sized manual through an enlarging copier. It's amazing how much clearer things become when you can read them!

Within the limitations described in section 6.1 of the TK2 manual, the DO function can be used as a powerful user-defined programming extension. The DO file is simply a sequence of commands or a routine that is stored on mdv, disk, or RAMdisk media without numbered program lines. If it is stored in the default drive, by just keying in <DO filename> the command-sequence or routine is activated or "RUN". It does not alter any listed program that is already in memory.

With TK2 activated, for direct KBD entry of a DO file to a disk in drive 1, the following method may be used for short command-sequences:

```
OPEN_NEW #5,flp1_filename

PRINT #5,'INPUT "Enter test text ";a$:PR
INT a$'

CLOSE #5
```

Note that the entire PRINT statement must be bracketed by either quotes or apostrophes and as in ALTKEY definition, if any bracketing within the statement uses quotes, then outer apostrophes must be used, or vice versa. Note, too, that a simple FOR loop may be used within a one line multi-statement but not the END FOR type or a REPeat loop. Also, if a DO routine is halted during processing, a NEW may be required before resuming.

Obviously, for longer command-sequences or routines direct entry from the KBD is not practical. Any line-editor such as THE EDITOR or my INFOwriter that does not insert extra control characters may be used to form and store the DO file.

Listing 2 is a routine that may be used to create the required ASCII files. With this, one might do several sets of ALTKEY definitions, for example, that would emulate on the QL the single-stroke keyword entry system or the VAL command many of us wish Uncle Clive had retained. Following the ALTKEY definition in listing 1 is a useful printer-command routine that shows the use of a simple FOR loop in a DO line:

LISTING 1

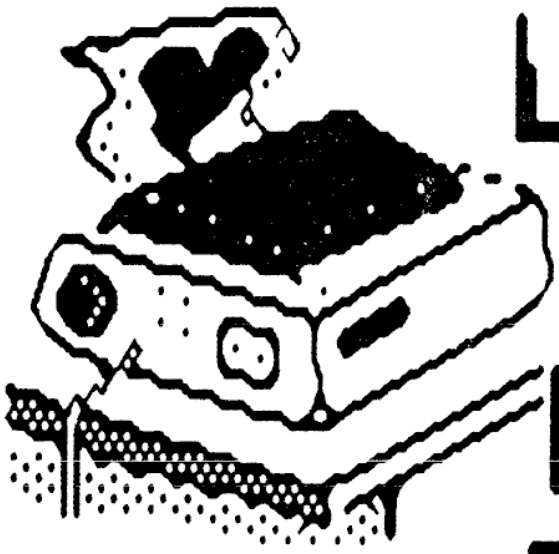
```
ALTKEY 'p','PRINT #0;"'

PRINT #0;"Enter command-codes one at a t
ime"\"EG: 27 52 -1 (-1 to exit)"

FOR n=1 TO 1000:INPUT #0;cc;" ";:IF cc=-
1 THEN PRINT #0;"END":n=1001:ELSE OPEN #
7,ser1:PRINT #7,CHR$(cc);:CLOSE #7
```

LISTING 2

```
100 TK2_EXT
110 FLP_USE flp: REMark Omit & change li
nes 160 & 330 for mdv.
120 CLS: CLS #0
130 REMark DO file output routine
140 INPUT "DO file title: ";filetitle$
150 INPUT "Save ";(filetitle$);" to driv
e #";dr$
160 filetitle$="flp" & dr$ & "_" & filet
itle$
170 INPUT "Max. no. command-lines: ";cml
180 DIM com$(cml,136)
190 PRINT "Enter line (limit 136 chrs.)"
\"@ to end input & save"\\
200 FOR n = 0 TO cml
210 INPUT (n+1);" ";com$(n)
220 IF com$(n,1)="@" THEN LET cnt=n-1: G
O TO 240
230 END FOR n
240 OPEN_NEW #5,filetitle$
250 FOR n=0 TO cnt
260 PRINT #5,com$(n)
270 END FOR n
280 CLOSE
290 CLS
300 INPUT "Repeat y/n? ";y$
310 IF y$=="y" THEN GO TO 120
320 STOP
330 SAVE flp1_DOfile_DEF
```



Looking For TIMEX Computer Products?

If so, look no further!!
We have the LARGEST stock of h/w & s/w for the T/S line of computers ANYWHERE IN THE WORLD!!

For a catalog and price list call or write:

AMG ENTERPRISES

1419 1/2 7TH STREET
OREGON CITY, OR 97045
503/655-7484 NOON-10PM PT T-S
FAX: 503/655-4116
VISA/MC/CK/MO - $3.50 (REFUNDABLE)
(STATE COMPUTER MODEL FOR PRICE LIST)

Available as UPDATE Issue Disk, see QL ISSUE DISKS

QLUSTer / QL_Utilities
by Al Feng

QLUSTer is a utility program which has been designed to provide easier file management than found in other front-end utility programs. QLUSTer works well within the QRAM environment and may be may be satisfactorily run as a TASK within TASKMASTER (some limitations). QLUSTer is TURBO-compiled and MINERVA compatible.

QLUSTer was designed to provide fast, selective file management. To that end, any valid source or destination medium may be readily accessed or designated. Up to eight screen pages of 76 files each (4 columns x 19 rows) are accessible.

The five, primary functions are ´COPY´ (source to destination), ´de-FILE´ (DELETE file), ´Hard-COPY´ (the "missing" LLIST command), ´re-FORMAT´ (FORMAT a medium), and ´pre-VIEW´ (convenient for confirming the contents of a file prior to COPYing, de-FILing, or hard-COPYing). The implementation of a utility on a file usually involves simply pressing the (bracketed) key which precedes a particular filename. In addition, a convenient clock setting routine using the ´up´ and ´down´ cursor keys (and of course, ´ENTER´) is included.

QLUSTer also implements five SuperTOOLKIT keywords [WCOPY, WDELete, SPooL, RENAME, WSTATus]. QLUSTer requires SuperTOOLKIT coding installed via a TK2_EXT (FLP_EXT, okay) call, external ROM, or RAM code, prior to LOADing.

A SAMPLE RUN-THROUGH

After LOADing, a "white screen" with the version number and other miscellaneous information will flash by. You will then see another "white screen" with a bar similar to what is illustrated (below). ´CHANGE_DEVICE´ will be highlighted, and a message prompting you to press the ´Space Bar´ will be near the bottom of the screen.

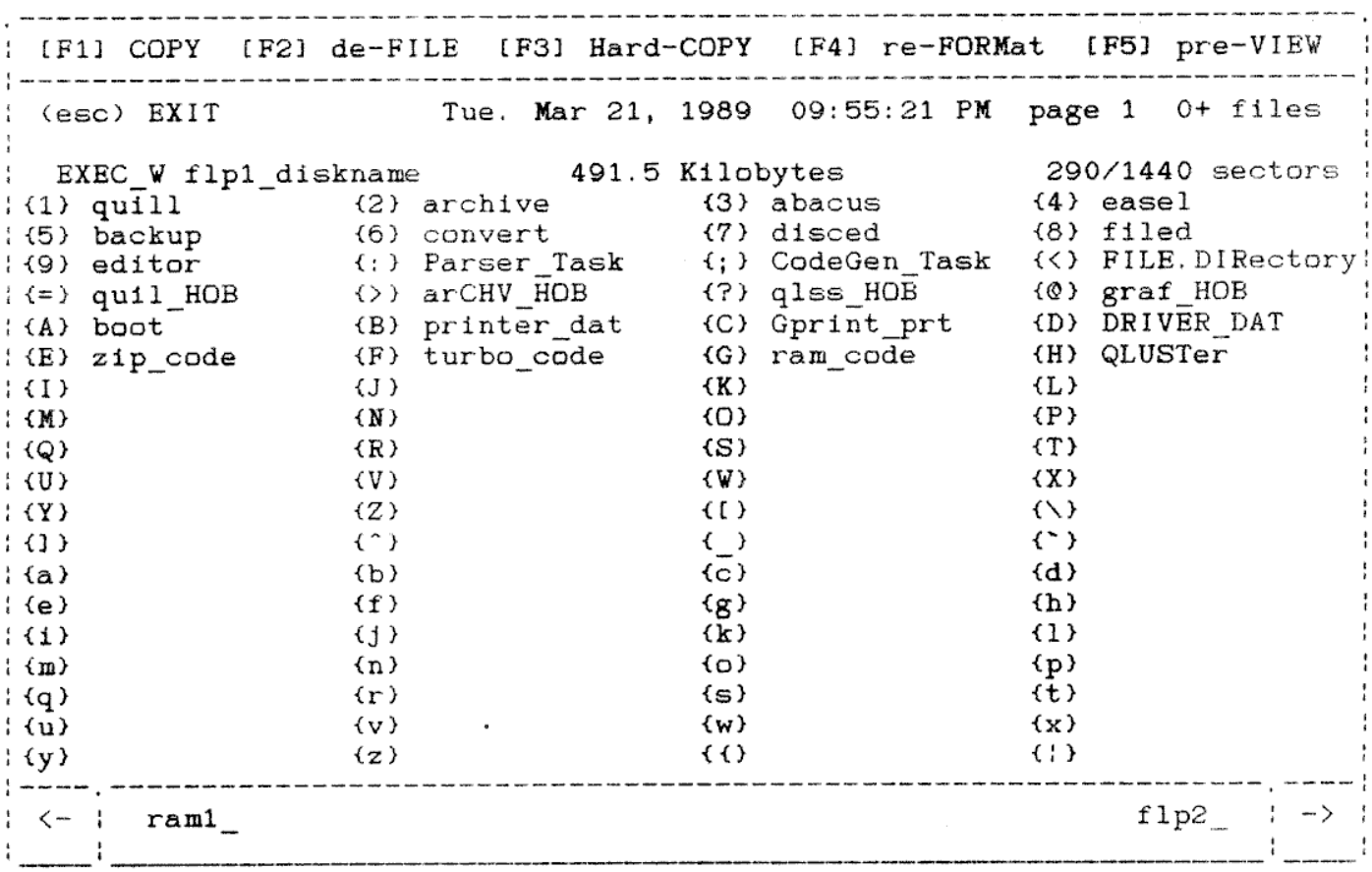
TAB > HELP EXIT AUTO_EXEC UTILITIES CHANGE_DEVICE CLOCK < shft TAB

You can navigate to almost any function within the program from this screen by ´TABbing´ along the command bar to the appropriate function name, and then pressing the ´Space Bar´. A ´shift TAB´ key combination will move the highlighted bar to the left.

When first LOADed, the program´s default medium is a null ´xxx´. This must be "changed" to a valid storage medium. Pressing the ´Space Bar´ will open the ´CHANGE_DEVICE´ window.

After pressing an appropriate letter (e.g., 'f'/'F' for 'flp1_'), the highlighted bar will move to 'AUTO_EXEC'.

Now, pressing the 'Space Bar' will reveal a screen similar to the following illustration (of course, the filenames on the screen will correspond to the disk you currently have in the selected drive).


[F1] COPY [F2] de-FILE [F3] Hard-COPY [F4] re-FORMat [F5] pre-VIEW
(esc) EXIT Tue. Mar 21, 1989 09:55:21 PM page 1 0+ files
EXEC_W flp1_diskname 491.5 Kilobytes 290/1440 sectors
{1} quill {2} archive {3} abacus {4} easel
{5} backup {6} convert {7} disced {8} filed
{9} editor {:} Parser_Task {;} CodeGen_Task {<} FILE.DIRectory
{=} quil_HOB {>} arCHV_HOB {?} qlss_HOB {@} graf_HOB
{A} boot {B} printer_dat {C} Gprint_prt {D} DRIVER_DAT
{E} zip_code {F} turbo_code {G} ram_code {H} QLUSTer
{I} {J} {K} {L}
{M} {N} {O} {P}
{Q} {R} {S} {T}
{U} {V} {W} {X}
{Y} {Z} {[} {\}
{]} {^} {_} {`}
{a} {b} {c} {d}
{e} {f} {g} {h}
{i} {j} {k} {l}
{m} {n} {o} {p}
{q} {r} {s} {t}
{u} {v} {w} {x}
{y} {z} {{} {|}
<-
ram1_
flp2_
->

The first of two, obvious aspects about the program becomes clear as you scan the screen; that is, the filenames are NOT presented in an alphabetical order. With the exception of the replacement of DELETEd files, the relative chronology of the files on the disk will be readily apparent.

Second, the sheer number of filenames may at first be overwhelming. While 76 filenames may initially seem like a lot to look over, you will probably find the broad perspective of a disks contents more satisfactory than a small bunker window which shows less than a dozen filenames at a time.

The "absolute" number of files on a disk are not indicated. Only the number of files NOT visible on the current screen. If you have more than 76 files on the disk, the number is indicated after the current page number and followed by '+ files'. A number greater than zero indicates that another page may be accessed.

Pressing ´F5´ reveals a similar screen format.

```
 [F1] COPY  [F2] de-FILE  [F3] Hard-COPY  [F4] re-FORMat  (  ) pre-VIEW
```

The line above the menu window will indicate which utility you are accessing with an empty ´( )´ rather than ´[F5]´, and the name highlighted within a colored block. Aas you move to other the utilities, the block and empty ´( )´ will change accordingly.

Pressing the key indicated within any of the (bracketed) prefixes preceding a filename activates the function upon the file. If you choose the bracketed character for the BOOT, you should see a LISTing of the BOOT program. If you ´view´ a machine coded program, you will see spaces filled with mostly unintelligible ´non-ASCII´ characters. A Quill_doc will be unformatted, with the text strung together. Quill_lis files will be ASCII files roughly formatted to show the layout.

The "Pre-VIEW" function allows you to view the contents of a file without actually having to LOAD it and then LIST it to the screen. Often times you do not need to "look at" an entire file. If this is the case, then press the ´(esc)ape´ key to pause or abort the pre-VIEW. Of course, you may use the QL´s "standard" ´CTRL F5´ key combination to pause.

Pressing the ´/´ key will change the highlighted word ("pre-VIEW") in the top line to WSTATus.

```
 [F1] COPY  [F2] de-FILE  [F3] Hard-COPY  [F4] re-FORMat  (  ) WSTATus
```

Accessing the WSTATus utility allows you to determine the file size (bytes), and the date the program was saved.

If you press ´/´, again, you will see that it has changed back to pre-VIEW.

Pressing ´F1´ will put you into the COPY utility. You will see a flashing cursor after the word "to" near the top of the main window. You must respond to this by either pressing <ENTER>; or, ´m´,´r´,´f´ and then <ENTER>; or, ´o´ <ENTER> followed by the drive type and <ENTER> and the number and <ENTER>, again. This becomes the temporary default.

Pressing ´F3´ again reveal a now familiar screen format.

```
 [F1] COPY  [F2] de-FILE  (  ) ser1 COPY  [F4] re-FORMat  [F5] pre-VIEW
```

To change the SERial connection being used by your printer, press the double quote key (shift ´). You will see the top line will now indicate the change. You can always toggle back by pressing the double quote key (combination) again.

```
[F1] COPY  [F2] de-FILE  (  ) ser2 COPY  [F4] re-FORMat  [F5] pre-VIEW
```

You will probably note that there is a "blank space" between the ´(esc) EXIT´ prompt and the clock. This is occupied by a "CAPS ON" message when appropriate.

The same screen format is used for all standard utilities. The exeception is WCOPY and WDELete which allow for somewhat less discriminate file handling.

To access the SuperTOOLKIT´s WCOPY facility, press the "toggle" key after you are in the COPY utility and after you have indicated the destination. Upon entering this portion of the program, you will see that you may choose:

```
                          _[d]oc    _[a]ba    _d[b]f
                          _[g]rf    _[o]ther/serial
    WCOPY flp1_@ PLATYPUS_[extension type]   []<<<    . . .
```

Or, press ´ENTER´, if you wish to execute a indiscriminate WCOPY from the the first file onwards.

If you choose ´d´, the WCOPY will be all files having the ´_doc´ extension; ´a´ will be all the files having the ´_aba´ extension; and, so on.

If you choose ´o´, you can either press ´ENTER´ and access all the files; or, you may either choose another extension (e.g., ´bin´). Although the second prompt asks for the ´_[extension name]´ you may INPUT the beginning portion of any filename ´string´ (partial or whole) which follows an underscore/´_´; thus, if you INPUT either "QLU" or "QLUSTer" (or, some other portion of the name), you should get both ´QLUSTer´ and ´QLUSTer_doc´ if they are both on the disk; and, any files which begin with "QLU" (if that was the partial ´string´).

The process is similar for WDELete.

QUIT a utility by either selecting another utility via the function keys, or by using the ´(esc)´ key to access the "opening page" to access the ´AUTO_EXECute page´.

After you QUIT an EXECutable program, you will be RETurned to QLUSTer´s ´(esc)´/"QUIT" page. Proceed.

To set the time, first access the opening screen. Then ´TAB´ to the ´CLOCK´. If the time on the QL´s clock is incorrect, you may RESET the clock to "day one"; change to current time, or ignore.

To reset the time to 'Sun. Jan 1, 1961 00:00:00' simply use a 'shift ENTER' key combination. To access the time setting routine, press the 'Space Bar'; then, simply use the 'up' or 'down' cursor key(s) to adjust the numerical value, and then press 'ENTER' to let your QL know that you wish to proceed. Alternatively, you may 'TAB'/'shift TAB' to another choice.

FILE.DIRectory

The 'FILE.DIRectory' is an active file. The medium being accessed by the program must NOT be WRITE PROTECTED. If you "pre-VIEW" the 'FILE.DIRectory', you will see that it is a list of all of the files on the disk.

FILENAME Length

Filenames longer than 19 characters are NOT recognized by the program. While more explicit (i.e., longer) names are nice, the "real" world only allows 12 character filenames, so longer filenames is a bad habit to get into. The suggested maximum length is still only 14 characters.

CHANGE_DEVICE <ConTRoL>(esc)

The 'right cursor' and 'left cursor' keys are used to move from one drive to another of a similar medium.

To access 'device3_' from 'device2_' via the cursor keys you must use a 'shift right cursor' key combination. This prevents unwanted access of a potentially non-existent device.

If you wish to access a device other than 'flp1_'/'mdv1_'/'ram1_', then press 'o'/'O'. Accessing a device which is not on your system will cause the QL to either crash (if there is no SuperTOOLKIT), or to set up a file which reads "ram3_FILE.DIRectory" on the disk in 'flp1_' (if, for example, you requested "ram3_").

Great effort has been taken to reduce the likelihood of "crashing" the program. Nonetheless, it can happen by attempting to duplicate a filename of an existing file on the same medium when RENAMing, or by COPYing to a non-existent medium.

Send comments, questions, or queries to:

Al Feng
15 Wake Robin Court
Woodridge, IL 60517
U.S.A.

(708) 971-0495

ELIAD´S WANDERINGS

by E.P. WANNUM

Here are some recent requests made to UPDATE for assistance in either buying, selling, or an appeal for assistance in the area of Sinclair or Cambridge computers. In the last issue all such requests were answered by other helpful readers, so I hope this tradition continues. This is users helping users. We accept " for sell" from subscribers, for free. For non-subscribers, we will take it under advisement on a case by case judgement.

(1) I am very interested in hardware projects, and would like to see articles on, or talk to someone interested in (a) high density disk interface for the QL, (b) converting cheap Apple Simms for use as QL memory expansion, (c) building the QL Expansion box from the Technical Guide or a review of the Rebel version, (d) build a card to drive an IBM PC backplane to allow use of higher quality displays, disks, etc., (e) article on which QUANTA programs work on each version of the QL. Contact: Don Walterman, P.O. Box 176, Troy, MI 48099-0176.

(2) In the last issue I asked for a fix to connect my ZX-81 to a monitor, and many good people responded. Now I have another query. I´m using a Z-SI/O I/F card with the TS2068 together with SPECTERM-64 V4.1. The I/F card is the 2050 version. With these items I can transmit at 300/1200 bps very well. My modem is the 1200 hc Avatex. The question is, how can the Z-SI/O be used to transmit at 19200 as it is claimed to be able to? If anyone has done this, or knows how to do this, I would appreciate your help. Armand Drucker, 194-02A 67th Ave., Flushing, NY 11365.

(3) I have a copy of Wordmaster and Typeliner and am having a problem with it. I have auto linefeed on my printer OFF, I loaded !custom and reset linefeed from 10 to 0, but still I get double line spacing. I´m using an Aerco interface and verified with the appropriate PEEK that it is in use. Help! Thomas E. Bair, 316 Atlas, K.I. Sawyer AFB, Mich. 49843.

(4) I need help in setting up a Printer for graphics. The printer is an Okimate 20, which does not have a manual. I have both the Commodore and IBM plug in cartridges for it. Without a manual, it is "Hunt and try forever". I want to get the codes I need to enter to get it to work with Print Factory and Pixel Print. Also has anyone ever tried to set these programs up for the Olivetti inkjet printer? Both printers still have many useful years left in them if I can get them to handle DTP. Send any helpful information you may have to me at : Eliad P. Wannum, c/o UPDATE COMPUTER SYSTEMS, P.O. BOX 1095, PERU, IN 46970. Your help will be appreciated.

(5) Mechanical Affinity is looking for QL software to market, be it from anywhere on the face of the planet (off planet will be considered). We are flexible on the terms of royalty, so present your software and what you are looking for and we can negotiate from there. We can also dispose of most Sinclair hardware for a fee. Contact us and let us know what you have. Phone Paul at 317-291-6002 or Frank at 317-473-8031. Or write to Mechanical Affinity, 513 East Main St., Peru, IN 46970. Please do not ship till we have been contacted, unless it is a ´donation´. Our goal is to extend the usefull life of Sinclair and Cambridge computers.

re:Update
1150 Windermere Dr.
Pgh. Pa 15218-1144

This letter and its information is "inspired' by a comment in your "Left Handed Ways of Working a Printer", page 20 of the October 1989 issue of Update Magazine.

My computer set-up consists of two computers and three printers. Their printers are tied together WITHOUT expensive or manually switched "A/B" switches, yet the correct printer functions every time.

The actual arrangement of these devices is shown in the enclosed sketch.

Specifically, two serial printers are both connected to my QL's Serial 1 [SER1] port. The two printers are electrically wired in parallel, the printer turned "on" is the one that prints.

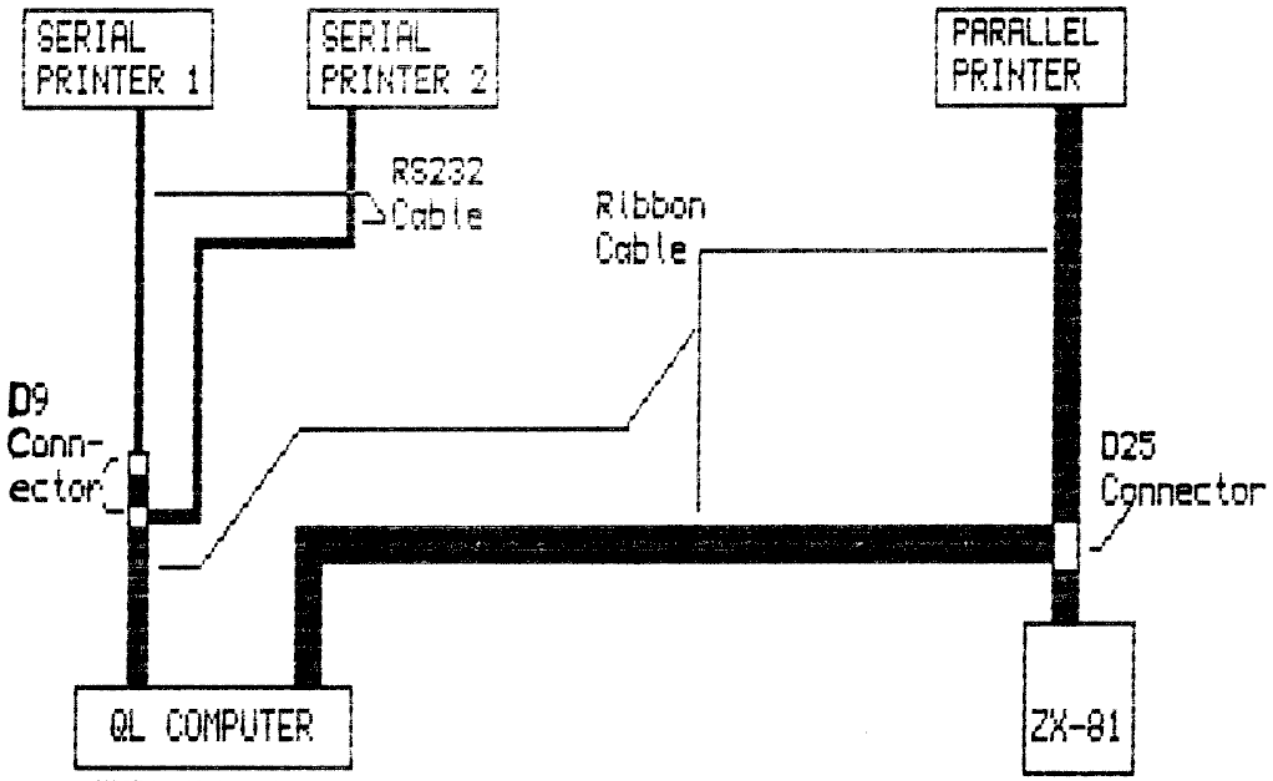
This simple scheme works because all the electrical signals from an "off" printer are electrically "high" or in plain jargon, just not there. When a printer is turned "on" and "ready" it then sends an electrically "low" signal to the computer, allowing the computer to transfer data to the printer. Turning the printer "off", or "off-line", or "out of paper" transfers this signal from electrically "low" to "high", stopping the computer's data transfer to the printer. Summing up this arrengement, the QL will send printer data through SER1 to the printer turned "on"; all with out an expensive switch or the need to manually select the correct printer.

I also have one parallel printer that is similarly wired. This printer is wired electrically in parallel with my QL's special parallel port and to my second computer's parallel port. The second computer is my trusty and well equipted ZX-81. The ZX-81's parallel port is a Memotech CIF. I only use and turn "on" one computer at a time, the QL or ZX. The computer "on" then prints to the common parallel printer. Operation is electrically similar to my serial printers. The Parallel interface from the "off" computer is electrically "high" and therefore funtionally non-existant.

The advantages of this simpler approach is the elimination of expensive "A/B" switches plus the need to consciously select the correct switch setting.

Regards,

Mort Binstock



Ed Grey Enterprises
P.O. Box #2186
Inglewood, CA 90305
(213) 759-7406

Call The Grey Matter BBS & RCP/M (213-971-6260)

SPECTERM-64 (TS-4.1) on tape.....$12.50 + $2.50 S&H
SPECTERM-64 (ZX-4.1) on tape.....$12.50 + $2.50 S&H
SPECTERM-64 (TS-4.1) AERCO, JLO, Larken.$12.50 + $3.00 S&H
MAX-COM Term/BBS SW (LKDOS v 3).....$25.00 + $3.00 S&H
PIX-FX (screen$ manipulator) on tape....$15.00 + $2.50 S&H
Loader V (Mterm 2 Enhancer).....$12.50 + $2.50 S&H
PC-Draw (ver 3.0) on tape.....$12.50 + $2.50 S&H
COLOR2GREY (convert color to greyscale).$12.50 + $2.50 S&H

QL Used/Tested w/ Cent I/F, cables, SW...$139.95 + $10 S&H
1520 Printer/Plotter Tested, I/F, all SW.$125.00 + $7.50 S&H
T/S2068 Used/Tested, CPU/Kybd only.....$60.00 + $5.00 S&H
T/S2068 Tested w/CPU, Manual, PS, Cables..$75.00 + $6.50 S&H
T/S1500 Tested w/CPU, Manual, PS, Cables..$40.00 + $6.50 S&H
T/S1000 Tested w/CPU, Manual, PS, Cables..$25.00 + $5.00 S&H
T/S2050 Modem Tested w/ PS, Specterm-64...$50.00 + $5.00 S&H
T/S2040 Printer w/ 1 roll paper.....$30.00 + $5.00 S&H
T/S1016 16K rampack.....$12.50 + $3.50 S&H
SCRAM Card (for T/S1000, 1500) .....$35.00 + $3.50 S&H
A & J Microdrive Tested (for 2068) .....$50.00 + $5.00 S&H
GE Cassette Recorder Tested w/ PS .....$10.00 + $3.50 S&H
Z-SI/O Bd. (no ext paddle), w/2050 & docs.$20.00 + $3.50 S&H
T/S2068 Power Supply Only (Used/Tested)...$12.50 + $3.50 S&H
12 Volt Composite Monitor (12", green) ...$30.00 + $7.50 S&H
..PS for above monitor and 2 disk drives..$15.00 + $7.50 S&H
NOTE: All T/S hardware is subject to availability.

The Sinclair Desktop Publishing Journal

Volume 2 Issue 1 Winter 1991
Edited By Mike Felerski

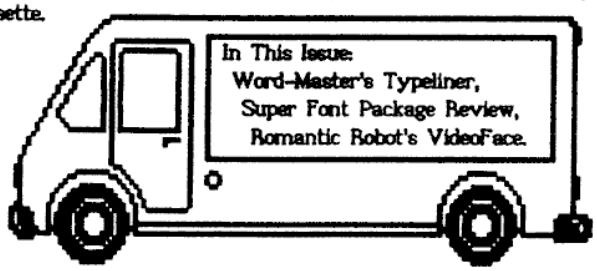
A 1991 Welcome

Welcome to the first issue of the Sinclair Desktop Publishing Journal for 1991! We here at the SDPJ hope that everyone had a wonderful holiday and we are also looking forward to a great year for Sinclair Desktop Publishers with more reviews, more in depth DP package uses and plenty of news on new products and services!

We have a big year ahead of us, with more and more Sinclair users becoming interested in desktop publishing, so I would like to go over some SDPJ publishing points:

The SDPJ is Edited by myself, Mike Felerski. It is created using the Word-Master, Print Factory and Pixel Print Plus desktop publishing programs for the TS2068/Spectrum computers. The SDPJ covers desktop publishing for TS1000, TS2068, Spectrum, QL and Z88 computers. Since the editor does not own a QL or Z88, the SDPJ invites any freelance writers who wish to submit articles regarding DP programs or utilities for these systems to send them to the address below. They must be in 8 1/2" x 11" format (allowing 3/4" left margin for three hole punch).

Articles may also be submitted as follows: In Tasword II, Spectral Writer, MSCRIPT or Word-Master format. They may be supplied on 3" (SSDD) or 3 1/2" (SS, DS, DSDD, 40 or 80 track) diskettes. Articles may also be sent on cassette.



Once an article has been published, it becomes the property of the Sinclair Desktop Publishing Journal and Update Computer Systems Magazine. Articles may be on any topic relevate to desktop publishing, including: Programs, graphics, fonts, word processing, transfer utilities, printer drivers, printers and various interfaces for any of the above mentioned computers.

If you have any questions or wish the return of any materials submitted to the SDPJ, make sure to enclose a Self Addressed Stamped Envelope (remember, the SDPJ is not a profit making venture).

Therefore, for all inquiries and submissions, write to:

The SDPJ
c/o Mike Felerski
1284 Brushwood Avenue
Cincinnati, OH 45224

3 Font Packages for the TS2068/Spectrum You Should Know About!

Compiled by the SDPJ Staff

This issue we are going to look at three of the most noted font packages available for the TS2068 and Spectrum computers on this side of the Atlantic Ocean. The packages are: Jack Dohany's Font Manager, Byte Power's First Class Fonts II and Bill Ferrebee's Font Packages.

Each package has been reviewed based on font editor ease of use, number of fonts and look of fonts. Each package provides fonts in the 8 x 8 pixel (or point) font size, which is the only size reviewed (an article discussing larger point fonts will be covered in the Spring or Summer '91 issue of SDPJ).

So now turn to Page Two for a review of each of the SDPJ's top three font packages for 1991.

Spotlight on VideoFace by Romantic Robot Ltd.

By Mike Felerski

When it comes to the tradition of simple and straight forward hardware and software interfaces from Romantic Robot Ltd of Great Britian, VideoFace is no exception! VideoFace is a hardware interface and software package for the TS2068 (see note at end of article) and Sinclair Spectrum which allows the user to digitize video images from any composite video (output) signal.

Composite video (output) signals can be found on the back of VCRs, LaserDisc players, some television receivers and video Camcorders (some Camcorders may require an interface). This is also the same signal which is output from your TS2068 "monitor" and Spectrum RGB port. The output jack is usually an RCA type connector.

Byte Power's First Class Fonts II

Cost: $22.95 for Editor, Fonts & Utilities

Available From:

Byte Power Magazine
1748 Meadowview Avenue
Pickering, ON L1V 3G8 Canada

First Class Fonts II is a font and utilities package which follows the Byte Power standard of "Powerful yet Simple" software which became so popular in BP's Print Factory series of Desktop Publishing programs. Bare in mind that First Class Fonts II arrived on the scene first.

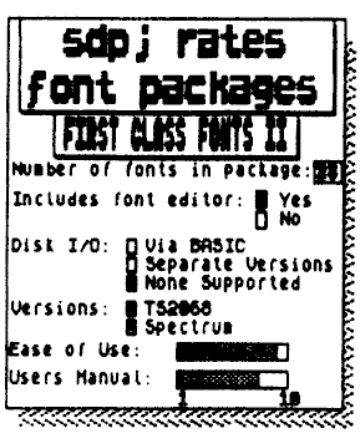
The program Fonts II includes a <Point and Click> font Definer and (TS2040 and compatible ONLY) word processor. The program also holds 28 fonts in its library for LOADing, SAVing and editing (aka font Defining).

The most notable feature lacking is the ability to modify the program for disk I/O. There is no BASIC available to modify as there is in the Print Factory programs. So all LOADing and SAVing is via cassette.

The First Class Fonts II package also includes four utility programs: 64 Column Print, Double Print, Real Double Print, and Olde English. All of these are screen utilities. 64 Column print is for printing 64 columns of text (1/2 wide characters) on screen similar to Zebra Systems' OS64 or Tasman Software's Taswide.

Double Print is a utility used to print any regular 8x8 pixel character font as a 16 pixel or point high character. Real Double is a utility which prints TRUE 16 point high characters to screen.

Olde English allows the user to create SCREEN$s consisting of 24x24 pixel "Olde English" characters (Caps ONLY). Each of the utilities is semi-relocatable and can be used within the user's own programs.



Finally, there is a DEMO program to show off and explain each of the utilities. First Class Fonts II includes a four page users manual.

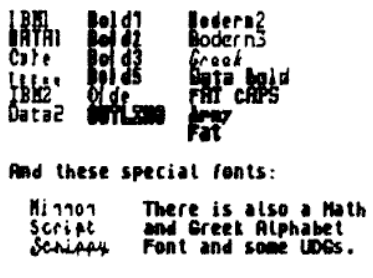
Jack Dohany's Font Manager

Cost: $20 for Manager, Editor & Fonts.

Available From:

Jack Dohany
390 Rutherford
Redwood City, CA 94061

Like many of his other software products, Jack Dohany's "Font Manager" is a very inter-active program. The top third of the screen displays the current font, the center third displays the buffer font, and the bottom third contains the menu command choices.



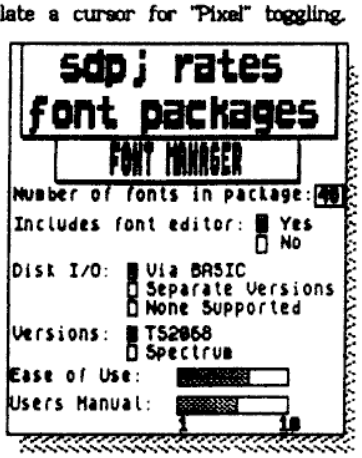
In addition to displaying font information, Font Manager also displays the UDGs (User Defined Graphics) which "tag" along with a font in the font library. It is important to note here that Font Manager is the only font editor/manager program which directly supports UDGs. Font Manager can hold a font library of up to 20 fonts and a buffer font in memory at one time.

Font libraries, UDGs and individual fonts may be SAVEd and LOADed. There is also a command to save a (backup) copy of the program itself. Both cassette and popular North American disk interfaces are supported.

Font Manager includes a Font Editor which uses arrow keys or a joystick to manipulate a cursor for "Pixel" toggling.

There is also a built-in fullsize printer driver and test routine for producing hard copy samples of fonts.

A 10 page users manual accompanies the Font Manager program. Except for the "Test" routine, and the printer driver, the manual is likely to be misplaced due to the "User Friendly" nature of the program itself. Font Manager is very flexable and does everything needed to manage, edit, an view fonts.



See page three for the review of Bill Ferrebee's Font Editor and Font Packages...

Bill Ferrebee's Font Packages and Font Editor

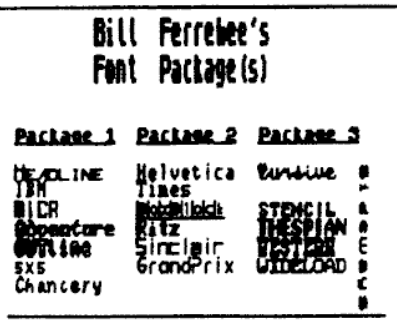
Cost: Varies depending on package ($9.95 to $19.95)

Available From:

Mountaineer Software
749 Hill Street No. 9
Parkersburg, WV 26104

RMG Enterprises
1419 1/2 7th Street
Oregon City, OR 97045
(503) 655-7484

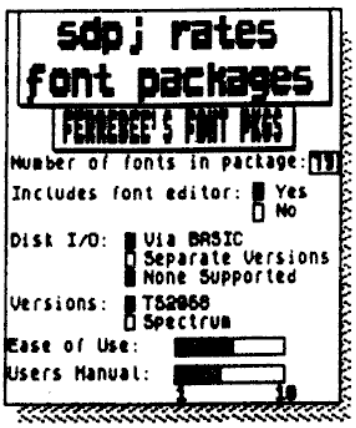
The Mountaineer Software fonts are the same fonts originally sold for Pixel Print users. At that time each package of fonts was sold individualy. Now all three pakages including the



Font Designer/Manager is available in one set.

Several of the fonts are impressive. The Font Designer/Manager is simple and straight forward, it is BASIC modifiable for disk I/O, and it gets the job done. But like Jack Dohany's Font Manager, it lacks the flair of Byte Power's Font Definer.

A separate package available is a 16 point font editor program. Here the joystick not only sets and resets pixels to create characters, but it is also used to make selections from "Pull-Down" menus at the top of the screen. With the 16 point font editor package comes twelve 16 point fonts. There are also two MEGA font packages available (both the 16 point fonts, editor and MEGAfonts will be discussed in a future issue of the SDPJ).



VideoFace

(From front page)

Package Overview

The Romantic Robot interface plugs into the back of the TS2068 (see note at end of article) or Spectrum and has a "Feed-Thru" connector on its back. The interface has a red and green LED on its front, a contrast adjustment knob on top, and a female RCA type jack on its left side.

The green LED indicates the presence of a composite video signal at the (RCA) input jack. The red LED indicates that the software is in "Scanning Mode", which I will discuss later. The contrast knob on top is to adjust the black and white picture contrast of the scanned image(s) as they are displayed on screen and stored within the computers memory. The (RCA) composite video signal input jack is used to connect the interface to the composite video source via a male RCA to male RCA patch cable (a shielded cable is recommended and is available from any Radio Shack store).

The "Scanning" software comes on cassette, in the form of a BASIC program and companion machine code. One of the important features is that the SAVE (as well as the programs machine code LOADing) is via BASIC. So is the COPY statement for printer output. This means that the BASIC may be modified for Disk I/O and various printer interface drivers!

Using the package

Once the hardware interface is plugged into the back of the computer, the composite video signal cable is plugged in, and the video source is turned "ON", the computer may then be powered up and the software is LOADed. Once the porgram has loaded, it auto-runs and produces the Main Menu on screen. The main menu has the following options:

```
(c) 1987  BY P.M.S.

'Z' OR 'SPACE' = STOP  SCANNING
'Q' OR 'P'     = START SCANNING
'S' = SAVE SCREEN 1 TO 6 OR ALL
'C' = COPY
'E' = EXIT TO MENU
'O' = STEP SCREEN$
'5' = MOVE SCANNONG LEFT
'8' = MOVE SCANNING RIGHT
'7' = MOVE SCANNING UP
'6' = MOVE SCANNING DOWN

'A' = ANIMATION ( 6 SCREEN$ )
'F' = FAST
'S' = SLOW
   ADJUST LEVEL CONTROL FOR
      THE BEST RESULTS

PRESS: '1' = START SCANNING
       '2' = ANIMATION ON
       '3' = ANIMATION OFF
```

(Continued on next page...)

Bringing It Together With Word Master's Typeliner

Up until now, we have only discussed Word-Master as a word processor and a file handler. This installment of the Word-Master articles will focus in on Typeliner, "The Desktop Publisher" program for use within Word-Master.

As discussed in previous articles, Word-Master allows you to load in sub-programs, or what I call "Modules". These modules are mini machine code programs which are executed from the File Handling menu of Word-Master. The Typeliner module itself is a desktop publishing program which allows you to format text (including fonts) and graphics (SCREEN$s) in order to produce an 8 1/2" x 11" page.

Let us now consider how a desktop published page comes together from

(Please turn to Page 4...)

VideoFace...

Pressing the 'Z' key or SPACE BAR takes you into the scanning mode. Here, the pictures and images from the video source are displayed on the screen. At this point you may make adjustments to the (black and white) contrast knob for picture quality, remembering that "What you see is what you get"--almost! Remember that your monitor has a contrast as well as a brightness knob which will also need adjustment! When I began my first scanning, everything looked too dark, until I printed out the picture to the printer. It then did not look nearly as dark. That is when I realized I had dimmed the screen when I was word processing!

When, during the scan, you see the image you wish to capture, you then press the 'Q' or 'P' key to stop scanning. At this point you can view the last six screen scans. This is done to allow for the time it takes for you to:

1) Realize this is the image you wish to save,

2) Press the STOP key,

3) allow the computer to realize it must stop!

Once the scanning has stopped, you may view the six saved images, save any one or all of the six images (as SCREEN$s), COPY (via TS2040 or your own full size printer code) any picture, or animate the six images. If none of the images are what you want, you can start scanning all over again!

One additional feature is the ability to adjust the scanning picture up, down, left and right during scanning. This feature is needed because SCREEN$s only include the very center of a composite video screen display. Thus, if your image is a bit to the left and out of the SCREEN$ area, you could use the arrow key to bring the image into the SCREEN$ area.

In all, the VideoFace digitizer from Romantic Robot is a high quality add on for the Sinclair Spectrum family of computers. It is supplied in an attractive, customized case and it does what it promises to do. The only thing lacking is indepth documentation with helpful digitizing hints.

The VideoFace Digitizer is available on sale for £29.95 from:

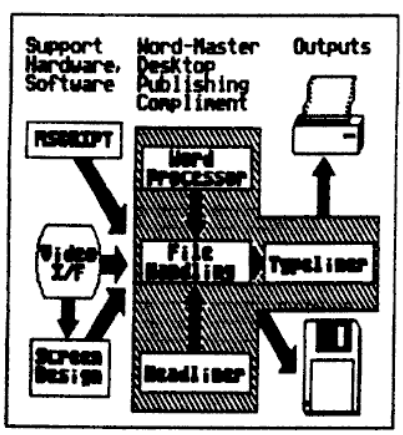
Romantic Robot UK Ltd.
54 Deanscroft Avenue,
London NW9 8EN

VISA Accepted
Phone: 081-200 8870

NOTE: Word on the street indicates the VideoFace may be plugged into the back of a TS2068 without Spectrum modification. The SDPJ assumes no responsibility for damage to hardware based on information provided in its newsletter.

Typeliner...

the start (see Figure 1). There are several different starting points such as creating a graphic, capturing a graphic or just typing in an article from a word processor. As seen in Figure 1, text for desktop publishing



may be entered with Word-Master or loaded from an alternate word processing program such as MScript. Graphics (SCREEN$s) may be loaded into Word-Master (via the File Handling feature) from such sources as video digitizers, or graphic art programs.

Once the text and graphics are selected and loaded into Word-Master file handling, Word-Master fonts may be loaded. Finally, the Typeliner program module itself is loaded and executed drawing in all of the elements to create the page. Once in Typeliner, text is formated into any size or shape column, and placed anywhere on the page. In the same manner, graphics are added to the page. Fonts and text justification are changed via commands within the text file itself. Finishing touches of boxes and lines are then added in almost any size or shape, anywhere on the page via Typeliner itself.

Finally, Typeliner provides draft printing, Near Letter Quality (three pass printing) or disk (/cassette) output of the final resulting page.

There is no doubt that Word-Master, Headliner and Typeliner are together "The Most Versatile" desktop publishing package available for the Sinclair Spectrum computers. It is also this author's opinion that it rivals any package available on any eight-bit computer system!

Editor's Note: As of press time, there was word on the street that ALL orders for Word-Master, Typeliner, etc. should be sent to:

RMG
1419 1/2 7Th Street
Oregon City, OR 97045

(503) 655-7484

Last Minute Details...

Now for a few bits and pieces:

The SDPJ is looking to review other video digitizers available for the TS2068/Spectrum. Products sent in for testing and review will be promptly returned.

This issue was prepared entirely with Word-Master, Typeliner, Art Studio, and Print Factory's Quick Screen.

Next issue, look for the SDPJ's first annual "Product Roundup", a 16 point font review, a look at VectorWare's PIX-FX and the latest on the NEW Pixel Print Professional version. See you in May! --MJF

REMEMBER
SUPPORT YOU SINCLAIR DEALERS!

QL DESKTOP PUBLISHING by Frank Davis

Desk Top Publishing on the QL is a large, yet seldom broached subject for QL users. I hope in this column to be of some help in getting this subject known and in more use. There are several fairly good programs and tools available to us. I will be first telling what is available and from where.

I will list what programs are available (that I know of), price if known, and from where they are to be gotten, along with what is required in the way of hardware to run them. Next issue we will get more into the differences to be found between these programs and some tips on their use. Information from you the user is solicited, along with your questions.

The first known DTP program for the QL seems to have been FRONT PAGE, from Gap in England. This is set up to run from microdrive, and can be ran on an unexpanded QL. It is available from SHARP'S for $29.95 plus $1.00 P & H, and is also available from Mechanical Affinity for $22.00 with P & H included. This program may also be available from RMG, so you may want to check there also.

FRONT PAGE EXTRA III is similar to the above program, but is set up to run from either disk or microdrive and can make use of expanded memory. It can be purchased from SHARP'S for $34.95 plus $1.00 P & H. This may also be available from RMG, but not from Mechanical Affinity at this time. Both of these programs allow you to add pictures and graphics into your text, as well as vary your print style and size (font).

PAGE DESIGNER is a program that is part of the QUANTA library and can be purchased via their North American librarian, Paul Holmgren. This can be set up on microdrive, but runs best on disk as it makes use of numerous pictures, graphics and fonts. There is a slight charge from the librarian to cover expenses, so give him a call early in the evening at 317-291-6002 to inquire. I don't know if this program needs memory expansion to run, as I have always used an expanded QL and never a 128K one with it.

PAGE DESIGNER 2 is the non public domain and polished version of the above program. I have yet to see this one in action, but it has been favorably reviewed in QL World magazine. It is available from SHARP'S for $59.95 plus $1.00 P & H.

DESKTOP PUBLISHER and DESKTOP PUBLISHER S. E. are available from SHARP'S for $45.95 and $79.95 respectively. The special edition (S. E.) requires disk drives to use.

PROFESSIONAL PUBLISHER by Digital Precision is considered by QL World to be the most extensive DTP for the QL. Many also consider it to be the most complex to learn, coming with a manual large enough to qualify as a book. I have used this enough to know that it can be put to at least some use by even beginners, but still let you know that there is a lot more to learn before becoming proficient at it. It does require disk drives and is available from SHARP'S for $99.95 plus $1.00 for P & H. This program, as well as DESKTOP PUBLISHER and DESKTOP PUBLISHER SPECIAL EDITION can also be purchased direct from Digital Precision Ltd., 222 The Avenue, London E4 9SE.

Perhaps the easiest way to combine text and graphics is to purchase the program Overdrive from SHARP'S for $24.95. This will allow you to add graphic symbols to your Quill files. I have usually seen this program listed under leisure in SHARP'S catalog which throws one off into thinking it is a game.

I have all but Page Designer 2 (which I am getting) so as I get more into these programs over the next few months I will be sharing with you what I find out. Send anything you wish to share or ask to UPDATE COMPUTER SYSTEMS, P. O. BOX 1095, PERU, IN 46970. See you next issue. All dealers listed in this article have ads in this issue. F. W. Davis

TWO-COLUMN & WIDE TASWORD PRINTOUTS

Bob Hartung, 2416 N. County Line Rd. E.
Huntertown, IN 46748

The following routine was devised to get around the hassle of doing a double-pass to print out side-by-side columns from TASWORD files. With a little aforethought in forming the file, it will also print 65-128 characters per line with alternate lines continued on the same line as the one preceding. To do this, word-wrap and right-justify must be turned off unless all justification is done in the second part of printed line.

If a file is already in RAM either from being loaded or written into TASWORD, it will be preserved when this routine is loaded in after a BREAK is made from TASWORD Basic. Stored files may also be loaded into the routine if device syntax is changed from Oliger SDOS as listed. A printer driver must be installed if you do not have SDOS or a driver on EPROM.

NOTE: If lines 20-70 are deleted from this routine and tape commands and FIND/REPLACE deleted from TASWORD, this routine may be merged with TASWORD. Add POKE 23300,60: POKE 23301,3 to line 9700 to use SDOS printer driver with lines 9702-9704, or else delete these lines.

```
  20 CLEAR 33000
  30 ON ERR RESET
  40 INPUT "LOAD tasfile - f"'"Do LPRINT
    - d"'"PRINTER set  - c ";a$
  50 IF a$="f" THEN INPUT "File name: ";
a$: LOAD /a$CODE
  60 IF a$="c" OR a$="d" THEN GO TO 9700
  70 GO TO 40
9700 ON ERR RESET : LET /p=o
9701 LET d$="": CLS : LET o=NOT PI: LET
I=SGN PI
9702 INPUT "Enter 4 to skip printer-set
";s$: IF s$="4" THEN GO TO VAL "9705"
9703 INPUT "Prtr CODE -1 TO STOP ";b: IF
 b<>-I THEN LET d$=d$+CHR$ b: PRINT b;"
";: GO TO VAL "9703"
9704 LPRINT d$: IF a$="c" THEN GO TO VAL
 "22"
9705 INPUT "Left Marg:       ";u'"Ctr Mar
g (>=2): ";c'"No. chrs/col:  ";cols: DIM
 c$(c): DIM d$(u): LET u=o: IF cols>VAL
"64" THEN LET u=I
9708 INPUT "First line no. to print: ";f
irstln: LET firstln=firstln-I: LET tasfi
le=VAL "firstln*64+33280": LET b=I: LET
c=I
9709 ON ERR GO TO VAL "9800"
9710 LET linect=o: LET pglines=VAL "54"
9711 FOR N=tasfile TO VAL "52480" STEP V
AL "64"+VAL "64"*u
9712 PRINT AT INT PI,o;
9715 INPUT "": PRINT #o;AT I+I,o;" LINE
";c'" BREAK LPRINT TO STOP ";pglines;"-"
;linect+I
9730 LPRINT d$;
9735 FOR J=N TO N+cols-I
9740 IF PEEK j>VAL "31" AND PEEK j<VAL "
128" THEN PRINT CHR$ PEEK J;: LPRINT CHR
$ PEEK J;
9741 NEXT J
9742 LET c=c+I: IF u THEN LPRINT : GO TO
 VAL "9770"
9743 LET cols2=N+pglines*VAL "64"-I
9745 LPRINT c$;
9746 PRINT AT INT (PI*PI),o;
9747 FOR x=cols2 TO cols2+cols
9748 IF PEEK x>VAL "31" AND PEEK x<VAL "
128" THEN PRINT CHR$ PEEK x;: LPRINT CHR
$ PEEK x;
9749 NEXT x
9750 LPRINT
9762 LET linect=linect+I: IF linect=pgli
nes THEN LET pglines=VAL "57": LET linec
t=o: LET N=cols2+I: GO TO VAL "9900"
9770 NEXT N
9800 PRINT FLASH I'" STOP LPRINT ": PAUS
E VAL "100": LPRINT : ON ERR RESET : GO
TO VAL "20"
9900 LET b=b+I: INPUT "Insert PAGE ";(b)
;b$
9920 GO TO VAL "9770"
```

DROPPED BYTES

When your MSCRIPT V5 drops an occasional printer-data byte after an AB switch and patch cable have been inserted into a parallel printer line, this fix suggested by John Oliger in his I.F. manual may work: POKE 35834,0. It may also work on later versions, but ONLY if the original values are 192 for PEEK 35834 and 8 for PEEK 42845, respectively. I have used it on both my Oliger and Aerco I.F.s, although the Oliger I.F. did not show any problem with the original code even with the AB switch and added patch cable inline. Apparently the additional transmission-distance as well as the processing by the I.F. sometimes causes a wait signal from the printer to be delayed so it doesn't change the READY state in time. -- Bob Hartung

DOMINO CUBES 212 971 5638
355 WEST 39th ST.
NEW YORK CITY 10018-1401
PRESIDENT.....MIKE FINK

WOULDN'T IT BE WONDERFUL TO DISCOVER OR FIND A MACHINE SO POWERFUL THAT ONE COULD WAVE A MAGIC WAND AT IT AND IT COULD LOOK FOR AND FIND ANY OR ALL OF THE LETTERS, FILES, RECORDS, PROGRAMS OR DOCUMENTS YOU HAVE STORED IN IT, AND AUTOMATICALLY!!, WHILE YOU ARE ASLEEP OR AWAY, PRINT AS MANY COPIES OF AS MANY FILES AS YOU HAVE INK!!!!!!!!

IT WOULD BE EVEN MORE AMAZING IF THIS PRINTER AND COMPUTER COULD FIT IN A SMALL SHOULDER BAG AND WEIGH LESS THAN 8 POUNDS!!

WHAT A MIRACLE!!!

INCREDIBLY, SUCH A COMBINATION EXISTS.....AND CAN BE HAD FOR LESS THAN A THOUSAND DOLLARS!

THE COMPUTER IS THE Z-88 ♣ ♠ ♥ ♦
THE PRINTER IS THE DICONIX 150

IT WILL PRINT 150 PAGES, OR 50 MINUTES **NOISELESSLY** WITHOUT EXTERNAL ELECTRICITY. WITH THE AC ADAPTER PLUGGED IN, YOU COULD ASK IT TO PRINT 2 MILLION COPIES, OR UNTIL SOMETHING WEARS OUT----PROBABLY THE INK WILL RUN OUT AT ABOUT 500 COPIES. THE COMPUTER IS GOOD FOR 20 HOURS ON 4 AA BATTERIES, AND FOREVER ON THE AC ADAPTER!

THE DICONIX PRINTS EPSON,IBM, GRAPHICS, SCRIPT, DOUBLE WIDTH, CONDENSED, SUBSCRIPT, SUPERSCRIPT, ITALICS-(EXCEPT IBM), OR ANY COMBINATION OF THESE.

IF ELECTRICITY IS AVAILABLE, YOU CAN USE THE C-130 SQUARE DOT PRINTER, WHICH IS A LITTLE FASTER, AND COSTS A LITTLE LESS THAN THE DICONIX, ALTHOUGH IT IS NOISIER. THE RIBBON IS A LITTLE CHEAPER THAN THE INK, AND IS GOOD FOR ABOUT 300 PAGES.

There are several places to buy the computer and or the printers.

BUT—THERE IS ONLY ONE PLACE TO BUY THE KNOWLEDGE OF HOW TO MAKE THE MACHINE DO THESE FANTASTIC THINGS ! !

DOMINO CUBES

100 percent SECURITY FROM VIRUSES!!

♣ ♠ CALL TO ARRANGE FREE DEMONSTRATION ♥ ♦

THE EASIEST AND BEST WORD PROCESSING PROGRAM!!

THIS PAGE HAS BEEN PRINTED noiselessly ON THE 150.

DOMINO CUBES 212 971 5638
355 WEST 39th ST.
NEW YORK CITY 10018-1401
president mike fink

THE NAME OF THIS FILE IS *DISKRIPTION.PD*, IT LISTS AND DESCRIBES THE VARIOUS DISKS THAT ARE FOR SALE.

DISKS CAN BE MADE TO ORDER FOR YOU, JUST CHOOSE WHATEVER FILES OR PROGRAMS YOU NEED OR WANT AND WE WILL TOTAL THE COST AND IF POSSIBLE DEDUCT A LITTLE IF YOU CHOOSE SEVERAL PROGRAMS ON ONE DISK. A SMALL DESCRIPTION OF EACH TITLE IS GIVEN ON PAGE 2, TO HELP YOU SELECT THE ONES YOU WISH. MANUAL A IS A BEGINNERS MANUAL AND IS FREE, (ALONG WITH SOME OTHER FREE TITLES,) IF YOU BUY THE Z-88 FROM US. MANUAL B IS AN ADVANCED MANUAL THAT GOES INTO SOME DETAIL. MANY OF THE AREAS ARE COVERED IN GREATER DETAIL SEPARATELY IN COLUMNS A,B AND C. WHEN MANUAL B IS FINISHED, IT WILL COVER ALL THE AREAS THAT ARE COVERED SEPARATELY, BUT NOT AS DEEPLY DETAILED.

SEE THE FOLLOWING PAGES FOR DETAILED DISKRIPTIONS

	$5 A	$10 B	$15 C	$25 D	$50 E
1	ELITE96.PD	QUAD-EQ.BAS	HEADS-TAILS.BAS	ANAGRAMS3-7.BAS	PRIMES-FINKS.BAS
2	FLAG-GR.BAS	PATTERNS-GR.BAS	DERIV-SP-SH.PD	MAIL-MERGE	FORM1040SPSH.PD
3	USER-DEF1.BAS	FORMATTING.PD ✱	SPSH-FUNCTS.PD	REMOTE-CNTRL.PD	PC-LINK-QL
4	BOXES.PD	MANUAL-A.L ◆	PR-ED-EXS.PD	MANUAL B	PAYROLL-SPSH.PD
5	CONDENSED132.PD	ALL-LOTTO.BAS ◆	FORMAT-EX.BAS	BASIC-PATCH-A	
6	CONDELITE160.PD	LIST-FILE.PD		BASIC-PATCH-B	
7	PROP77NJ.PD	CHECKBOOK.PD		BLAISE.BAS	
8	PRIORITY.PD				
9	DX150WIDTHS.PD				
10	BAR-GRAPH.BAS ◆				

SOME DISK FILES CAN BE ISSUED ON PAPER PRINTOUTS, FOR LESS MONEY FOR PEOPLE WHO AS YET, DO NOT HAVE A DISK DRIVE.

	$75 F	$100 G	$125 H	$--- J	$250 K
1	PC-LINK-IBM		PC-LINK-MAC		♠PIPEDREAM-PC
2	MONEY-TABLES.L		♠SPELLCHK-PC		

✱ MOST IMPORTANT FILE TO HAVE FOR UNDERSTANDING WORD PROCESSING.
◆ FREE FILES WHEN YOU BUY THE Z-88 FROM DOMINO CUBES.
♥ 32K EPROMS COST $45 + $Q
♣ 128K EPROMS COST $95 + $Q
♠ 3.5" or 5-1/4"
Q = 1/2 THE COST OF EACH DISK DRIVE PROGRAM.
EXAMPLE: D1 + D2 ON SEPARATE DISKS = $50
D1 + D2 ON ONE DISK = $40
D1+D2 ON 32 K EPROM = $45 + $12.50 + $12.50 = $70

USE: ELITE-1.PED; n=1; COL.A=6,COL.B=88, SAVE C:B2,E:A1, 95 SEC

DOMINO CUBES 212 971 5638
355 WEST 39th ST.
NEW YORK CITY 10018-1401
PRESIDENT.....MIKE FINK

DISK D3 IS FREE! WHEN YOU BUY THE Z-88 FROM ME; IF YOU SIGN THE NON-DIVULGENT PLEDGE!!

A1 =HOW TO MAKE 96 CHARACTERS/LINE INSTEAD OF 80...DETAILED INSTRUCTIONS AND EXAMPLES.
A2 =BEGINNERS EXAMPLE OF SIMPLE GRAPHICS WITHOUT GOING INTO THE GRAPHICS MODE; USA FLAG, AND PROGRAM IN BBC BASIC.
A3 =HOW TO REACH SPECIAL GRAPHICS CHARACTERS (EPSON), IN BBC BASIC WITH EXCELLENT EXTRA EXAMPLE OF HOW TO PRINT DIFFERENT FONTS FROM BASIC, AND HOW TO USE THE LITTLE KNOWN SPACE COMMAND, AND A VERY GOOD EXAMPLE OF HOW AND WHERE TO USE THE WIDTH COMMAND!!!
A4 =HOW TO USE PIPEDREAM TO DO QUICK GRAPHICS WITHOUT PROGRAMMING IN BASIC, MAKING USE OF THE TRANSLATABLE CHARACTERS IN
$5 THE PRINTER EDITOR. SEE DISK C4 FOR PRINTER EDITOR EXAMPLES!
A5 =HOW TO MAKE 132 CHARACTERS/LINE INSTEAD OF 80...DETAILED INSTRUCTIONS AND EXAMPLES.
A6 =HOW TO MAKE 160 CHARACTERS/LINE INSTEAD OF 80...DETAILED INSTRUCTIONS AND EXAMPLES.
A7 =HOW TO USE PROPORTIONAL SPACING, (-LOSING JUSTIFICATION-), SOME DETAIL
A8 =EXPLAINS THE Z-88'S ALPHABETICAL SORTING PRIORITIES; IF POSSIBLE????
A9 =HOW TO MAKE ALL THE DIFFERENT CHARACTER WIDTHS ON THE DICONEX 150; DETAILED INSTRUCTIONS.
A10=BAR-GRAPH AND/OR PROBABILITY CURVE EXAMPLE: FREE WITH PURCHASE OF THE Z-88

B1 =PRINTS THE REAL ROOTS FOR ALL QUADRATIC EQUATIONS, IF ROOTS ARE IMAGINARY, IT SO STATES.
B2 =USING THE Z-88 CHARACTER CODE AND THE PRINTER EDITOR TRANSLATIONS, THIS MAKES BEAUTIFUL PATTERNS THAT YOU CAN ALTER BY MODIFYING THE PROGRAM: IN COLOR IF YOU HAVE A COLOR PRINTER.
$10 B3 =HOW TO FORMAT; PROBABLY THE MOST IMPORTANT FILE, ALONG WITH DISK C4!!
B4 =THE UNDERSTANDABLE BEGINNERS MANUAL BY MIKE FINK, THAT ALLOWS YOU TO USE AND ENJOY THE Z-88 WITHOUT GETTING FRUSTRATED AND ANGRY, TRYING TO FIND ANSWERS IN THE CAMBRIDGE MANUAL WHICH IS GOBBLEDEEGOOK.
B5 =PROGRAM IN BBC BASIC GENERATES RANDOM LOTTO NOS. FOR ANY STATE LOTTO--BY MIKE FINK; FREE WHNN YOU BUY THE Z-88 FROM DOMINO CUBES.
B6 =HOW TO MAKE AND USE LIST-FILES
B7 =BALANCE YOUR MONTHLY BANK STATEMENT-QUICK,EASY

C1 =A SHORT COURSE IN ELEMENTARY PROBABILITY.
C2 =EXAMPLES OF HOW TO CREATE AUTOMATIC DERIVATIVES WITH THE POWERFUL SPREADSHEET FUNCTIONS!!
$15 C3 =EXAMPLES OF HOW TO USE MOST OF THE SPREADSHEET FUNCTIONS--QUICKER AND EASIER THAN PROGRAMMING!!
C4 =HOW TO USE THE PRINTER EDITOR; THE MOST IMPORTANT FILE AFTER DISK B3.
C5 =HOW TO FORMAT YOUR SCREEN AND PAPER PRINTING FOR YOUR OWN PROGRAMS, A MATHEMATICAL INVENTION BY MIKE FINK, MAKES YOUR MARGINS AND OUTPUT EASY.

D1 =THIS PROGRAM PERMUTES M THINGS, N AT A TIME. THE THINGS IT PERMUTES, ARE LETTERS, NUMBERS, SPACES, SYMBOLS OR ANY COMBINATION OF THESE. FOR EXAMPLE IT WILL PRINT ALL ARRANGEMENTS OF 4 LETTER WORDS FROM A GROUP OF 4 OR MORE LETTERS!
D2 =THIS PROGRAM IN PIPEDREAM; ALLOWS YOU TO CREATE YOUR OWN MAILING LIST AND MAKE ONE LETTER WHICH CAN AUTOMATICALLY BE ADDRESSED TO ALL OR SOME OF THE PEOPLE ON YOU MAILING LIST.!!
D3 =REMOTE CONTROL - A DISCOVERY BY MIKE FINK; REQUIRES THAT YOU PUT IN WRITING THAT IF YOU PURCHASE THIS INFORMATION,
$25 YOU WILL NOT NOT MAKE COPIES FOR OTHERS, NOR GIVE THIS KNOWLEDGE TO ANY OTHER PEOPLE!!
THIS SPECIAL KNOWLEDGE IS FOR THE SOLE USE AND ENJOYMENT OF MY CUSTOMERS!!
D4 =AN ADVANCED MANUAL BY ME, COMPILED FROM ALL THE OTHER FILES THAT TEACH AND SHOW YOU HOW TO MAKE THIS INCREDIBLY SOPHISTICATED COMPUTER DO SO MANY INTRICATE, FASCINATING AND WONDERFUL THINGS.
D5 =ALLOWS ON SCREEN LINE EDITTING OF BBC BASIC WITHOUT GOING BACK AND FORTH TO PIPEDREAM, SHOWS SOPHISTICATED PROGRAMMING FOR GRAPHICS.
D6 =ALLOWS ON SCREEN LINE EDITTING OF BBC BASIC WITHOUT GOING BACK AND FORTH TO PIPEDREAM, SHOWS SOPHISTICATED PROGRAMMING FOR GRAPHICS.
D7 =A GREAT SCREEN VIDEO SHOWING PASCAL'S TRIANGLE, A BALL VISIBLY AND AUDIBLY FALLING THRU THE TRIANGLE CREATING THE PROBABILITY CURVE SHOWN ON SCREEN AS A BAR-CHART!!!

DOMINO CUBES 212 971 5638
355 WEST 39th ST.
NEW YORK CITY 10018-1401
PRESIDENT.....MIKE FINK

DISK D3 IS FREE! WHEN YOU BUY THE Z-88 FROM ME; IF YOU SIGN THE NON-DIVULGENT PLEDGE!!

E1 =ENTER ANY NO. LESS THAN A BILLION, AND IN A FEW SECONDS, YOU WILL KNOW IF THE NO. IS A PRIME, AND IF NOT,WHAT ITS FACTORS ARE, IF THE NO. FALLS INTO ONE OF MIKE FINK'S *FAMILIES*; DISCUSSED IN DETAIL. MR. FINK IS THE FIRST PERSON ON THIS PLANET TO DISCOVER THE SOLUTION TO THIS PROBLEM. HIS ORIGINAL PAPER WAS PUBLISHED IN MENSA MAGAGAZINE SOME YEARS AGO, AND LENDS ITSELF TO THE SIMPLE PROGRAM SHOWN, WHICH IS THE RESULT OF COLLABORATION WITH MR. FINK'S BROTHER ROBERT FINK; (-CANADA-).

$50 E2 =A MULTI-PAGE INCOME TAX FORM SPREADSHEET THAT ALLOWS YOU TO CUSTOMIZE *YOUR* TAX LAYOUT SO THAT ONCE YOUVE FIXED IT, EACH YEAR, YOU JUST FILL IN THE NUMBERS, PUSH ONE BUTTON AND ALL-ALL-ALL THE CALCULATIONS ARE MADE FOR YOU; AND YOU PRINT AS MANY COPIES OF ALL, OR PART OF, THE RETURN AS YOU REQUIRE WITHOUT HAVING TO GO TO A COPY SHOP!!! ONCE YOU MODIFY THE FORMS TO FIT YOUR NEEDS, YOU SAVE IT ON A DISK OR AN EPROM, AND YOU CAN DO YOUR WHOLE RETURN IN LESS THAN AN HOUR!!!

E3 =SOFTWARE AND A CABLE TO TRANSFER FILES AND SPREADSHEETS TO AND FROM YOUR QL ! !

E4 =PRINTS PAYROLL CHECKS AND DEDUCTIONS FOR AS BIG A LIST AS YOU WISH, AUTOMATICALLY AFTER YOU ENTER THE DATA

F1 =PC-LINK-IBM; CABLE, SOFTWARE, 5-1/4" DISK; TRANSFERS FILES TO AND FROM IBM TYPE PC'S

$75 F2 =EVERYTHING INVOLVING MONEY, INTEREST, AND TIME BY MIKE FINK

$?? G

H1 =MACLINK; CABLE, SOFTWARE, DISK; TRANSFERS FILES TO AND FROM MAC TYPE PC'S

$125 H2 =3.5" OR 5-1/4" SPELLCHECKER FOR THE PC; WHEN LOADED BECOMES A PULL-DOWN MENU AND OPERATES FROM WITHIN PIPEDREAM. IT PROVIDES CHECK-AS-YOU-TYPE, OR FILE CHECKING, USER DICTIONARIES, 90,000 WORD MASTER DICTIONARY, BROWSING WITH WILDCARDS AND ANAGRAMS. ON A FAST COMPUTER, SPELLCHECK CHECKS AT ABOUT 40,000 WORDS PER MINUTE.

J

K1 =PC PIPEDREAM DISK---GIVES THE SPREADSHEET AND WORD PROCESSING FUNCTIONS OF PIPEDREAM DIRECTLY INTO A PC ON EITHER

$250 SIZE DISK, AND ADDS FINANCIAL FUNCTIONS, POPULATION VARIANCE, ALLOWS YOU TO REDEFINE THE PC KEYBOARD, USE FOREIGN CHARACTER SETS, MACRO FILES, PRINTER DRIVERS, LOTUS CONVERSION, AND MORE.....

New address: Domino Cubes
1800 7th Ave. Suite 1-C
New York, NY 10026

New phone: 212-749-7061

NON-EPSON SCREEN DUMPS FROM EASEL

-- Bob Hartung --

All is not lost for Trump Card users who want to do screen-dumps from Easel but do not have an Epson-compatible printer. All that is required is to make a screen save as provided by the program, then after aborting the program, load this data back into the display file where the Trump Card SDUMP (or other screen-dump SW) may be used on it. This procedure may also be used on screen data saved as in example 1 for SBYTES in the keywords section of QLUG.

Insert DIR to display a directory before entering LOAD name. Note that the first value in SDP_SET must define the type of your printer. Experiment with others of the same make if your particular model isn't listed in the TC manual. A RESET will abort EASEL and load in this routine as BOOT if saved on your screen-data disk/mdv.

SCREEN DUMP ROUTINE

```
100 FLP_USE flp
110 TK2_EXT
120 CLS #1
125 INPUT 'Scale 1-2-3: ';sc
130 SDP_SET 16,sc,1: REMark C.Itoh
140 INPUT 'Screen name (in flp2_): '\nam
e$
150 name$='flp2_' & name$ & '_pic'
160 INK #0,0: CLS #0: CLS #1
165 WMON
170 LBYTES name$,131072
180 SDUMP
190 INK #0,7
200 STOP
210 SAVE flp1_scrndmpCIT
```


AERCO

ACME ELECTRIC ROBOT CO

Box 18093 Austin TX 78760

Ph (512) 451-5874

EMSoft

Software for the **QL** that really works

Now has in-stock the very best true WYSIWYG **QL** word-processor: **text87** ver 3.01 with **Qtyp** spell check and several new features. (and unlimited North America help line). $119.95

fountext88	graphic drivers	$49.95
founted89	font editor	$29.95
2488	24 pin drivers	$29.95

COMING SOON

typeset90-deskjet HP-deskjet driver

Due to adverse exchange rates we had to raise prices. There are a few titles in stock at the old price. Call for availability.

Order two or more **Software87** titles and take 10% off the second title, 15% off the third and fourth. (Not applicable to **text87**.)

TAX-I-QL/90	_aba	$24.95
INVENTORY	_dbf	$19.95
TRUST_FUND	_dbf	$24.95
QLAND_LORD	_dbf	$24.95
MAILBAG	_dbf	$24.95

(Order now. Get free update to ver 3.1 in 02/91) ***(EMSoft***_dbf upgrades) $4.95

From Wood and Wind

DBTutor	_dbf	$24.95
DBProgs	_dbf	$19.95
Chaos Busters	_dbf/SB	$29.95

From MEDAC

Ask for statistical and engineering software

New Titles:

Files2 files utility upgrade for Taskmaster. Now also Exec's instead of TKII $26.95

MS-QLink read/write/transfer MS-DOS and QDOS or MS-DOS disk formatting any drive @$34.95

Tab>Editor A friendly editor with word wrap in up to eight colums with hard TAB @$34.95

QLuMSi DOS file handling simulator $19.95

On 5.25"/3.5". Microcartridge add $3.00/cart.

FREE CATALOGUE

EMSoft

P.O. Box 8763

Boston MA 02114

(617) 889-0830

COMPUTER THERAPY

Bill Woodward

In the spring of 1980, I suffered two brainstem strokes. The legacy of the apoplexy was very little physical damage, but mostly mental, e.g., aphasia, apraxia, ataxia (impairment of speech, coordinated movements, and involuntary muscles), and loss of equilibrium. Thirteen days in the local VA Medical Center and six weeks convalescence at home let prepared me to return to my work as a teacher in Florida State Prison.

In October 1980, a fellow teacher purchased the world's first computer under $200.00 the ZX80 for me. My condition would not let me make the purchase myself. This was the start of putting my mind back together.

As time and money dictated, I acquired the ZX80 upgrade, a 64K ram pack, the ZX81, the SPECTRUM, the TS2068 and other goodies ever seeking the THE COMPUTER. In January of 1983, the stress of the job finally disabled me with "poststroke syndrome" and I had to quit work.

I was learning computing to communicate. Word and math games were a must. Over the years they have 'rewired' my brain. Word processing seemed a must. I search high and low for information, for programs, for anything that would aid in my recovery.

My attention was taken by a short math program in the SYNC magazine. I toyed with it, I dreamed of it, and played with this program through the ZX81 up and finally on the TS2068 I developed a program for the SUM magazine, i.e., SMILY FACE ARITHMETIC.

I purchased several word processors(?) as they were being developed for the ZX computers. Most left a lot to be desired, but Bob Fingerle's processor was the best up to that time. As a matter of necessity, in a term paper in December of 1982, I used LPRINT and the statement for each line to print a two page term paper for my college class. It was slow but it worked.

When Tasword II, with its embedded printer commands, made its debut it became my mouth piece. When Sir Clive made the Quantum Leap, that was Ice Water to a thirsty man. Unless you have been deprived of use of some of your faculties you will never understand how exuberant I became with my new QL and its Psion software; out of this world!

When I was elected editor of the stroke club bulletin, I said, "You are all out of your trees." The first one page bulletin took me three months and looked like the first letter a grade school student wrote. I edited the stroke club bulletin for four years, each one an improvement on the previous one. I made a minor data file of the member's names, addresses, phone numbers, spouses, and birthdays.

When it came to making address labels, it was easier for me to figure out how to print the three across label from QL Spread Sheet than it was to figure out how DUMP works on the QL Data Base, so I print all our mailing labels by using the QL spread sheet.

I also needed a good Checkbook Balancer. To me the only near good one was the one for the ZX81 after I had modified it. Don't get me wrong. I am not a programmer. All I know about the computer is what I have learned from necessary since I had my strokes. My brain does not always give me the information I need for the job at hand. I have to keep the manuals handy so I can refresh my memory on how to or what does the present job. I am not crying over spilt milk. I am proud of the fact that the Good Lord gave me enough gumption to get in there and scratch for the knowledge to make this computer do as I say do.

After eight years of digging I am still digging and thankful to have the energy to keep at it. I am glad that Bill Fischer has given me the room in his QLUSA to place my commercial. THERE IS NO SUCH THING AS A FREE MEAL or a computer that runs itself as you wish it to do. I know what you are experiencing when you sit down to the computer and stare at the keyboard and the cursor blinks back at you.

I am going to try to remember the times I have wondered to myself, "Which key do I punch to get this thing started?" Then I will write out an article about WHAT DO I DO AFTER I TURN ON THE SWITCH.

I have had to buy software, firmware and hardware to get my computer to get my computer to obey me. I am still in the novice class after eight years. I am not afraid to ask questions, or to have anyone to show me how to do something. Most of what I work with was developed or inspired by others. Two operations that are a must in computing is to SAVE and BACKUP frequently. 1)DO NOT LEAVE YOUR COMPUTER, EVER WITHOUT SAVING WHAT YOU ARE WORKING ON! 2)DO NOT QUIT FOR THE DAY WITHOUT BACKING UP YOUR DISK OR MICRO CARTRIDGE. When you have worked for hours and failed to SAVE or BACKUP and had a sudden lightning strike and your monitor looks like finger painting by Gargantua you will wish you had both SAVEd and BACKUPped! Believe me.

So I put my Bank Statement Reconciliation ideas to work on the QL spread sheet. See the results on the front page of QLusa Vol.1988/ ISS #1. A normal programmer should write that in couple of hours, but it took me several years. Each idea had to be developed and tested to see if it did the work that I needed. Some ideas came to me in the middle of a deep sleep and by the time I was awake they had vanished but returned at a later date. Since my strokes, I have had to remove the word FRUSTRATION from my vocabulary and replaced it with the word INSPIRATION. Now when something will not work, instead of getting hot and blowing up I remain calm and use the cause of my failure as an incentive to correct the problem. I was warned to stay out of all STRESSFUL situations.

The beauty of the QLSS is the fact that you only have to fill one square at a time, and it is very easy to see what you do as you modify the 'program' and you can see the result of each change as you make it. More on this later.

The QL with Quill and Abacus became my work horse. All of my correspondence is on the word processor and all my doodling is on the spread sheet. From what I have heard no other computer has all the ease of operation as the QL with the Psion programs.

IF

Have you ever wondered what you would do IF the command IF was suddenly obliterated from the computer languages. If IF was not available to the computer hobbyist it would have had to be invented.

In the Check Book Balancer I needed a way of differentiating between debiting a check amount and crediting a deposit amount. QLUG ABACUS Page 44 IF(expression,true,false). Remember, in its native tongue, binary, the computer speaks only two ciphers, 1 & 0, true and false, or as a switch on and off. In cell E10 we placed the formula IF(D10,G9+D10,G9-E10). Translated into English this reads IF cell B10 contains a number add the amount in cell D10 to the total in cell E9 and put it in E10, or if cell B10 does not contain a number subtract the amount in cell D10 from the total in E9 and put it in E10. In ABACUS you can link together or concatenate many IF statements to make the computer choose among many alternatives, e.g., IF(B10,E9+D10,IF(C10,E9*D10,IF(A10,E9/D10,E9-D10)))

In BASIC this expression, IF..THEN..ELSE, also gives us a way to program the computer into making a choice. The statement reads IF the statement is true THEN the computer will do this; IF the statement is false it will do ELSE.

We have one more IF statement, QLUG ARCHIVE page 44 IF n.exp :...[: else :...] : endif. Without ELSE If the expression is true the following statements are executed. IF false execution transfers to the statement following endif. With else if true the statements between IF and else are executed. Otherwise the statements between else and endif are executed.

These are a few of the ways this little insignificant(?) IF can be used. I have only scratched the surface to show you that with a little ingenuity and perserverance you can work wonders with the Psion software.

QL UPDATE ISSUE DISKS

These disks contain at least one major piece of software written specifically for disk drive and are guaranteed to be worth the money. The rest of the disks are filled with various utility programs taken from the issues of UPDATE and a few surprises thrown in. Half of the money goes to the author and is meant to encourage new programming for the QL that makes use of the disk drive systems, and microdrives on both the expanded and unexpanded QL. Where possible we will give a version for each of these configurations. Some of the programs take advantage of TK2 by Tony Tebby. All are 20.00, except QLuster, which is $15.00; includes P & H, add $1.00 CAN.Available as 3 1/2 or 5 1/4 disks. Add $5.00 for mailing to other countries. We accept personal checks, company checks, money orders as well as International Postal Money Orders, but no charge cards. If ordering on MDV, then please include one that is already formatted, so we will know it will run on your QL. Due to the expense of MDVs this is necessary. If two MDVs are required we will state so in the ad.

1) HARTUNG UTILITY ISSUE DISK- Several excellent programs such as stand alone data base, Address, and QSO files. All are in Superbasic. Lots of hints and tricks for programmers. Requires some knowledge of Superbasic or a yen to learn. Recently updated by Bob Hartung. Address file can be used as inventory program. It can print out labels. Both screen or paper printouts can be by Alpha sort, or be by last name.

2) CABLE ARCHIVE ISSUE DISK- Contains six Archive programs along with Doc files to get you going on making use of the Archive programming language. Also has Tasket, plus Doc file, to give you multi-tasking on your QL (much cheaper than QRAM or Taskmaster). Included is Arithmetic, a Superbasic program for math, along with math drills. This is for both the advanced and beginner user and greatly extends the use of Archive. To order on microdrive send two formatted microdrives, too much for one!

3) QLUSTER ISSUE DISK by Al Feng- Ql utilities to unclutter your disks and microdrives. COPY, DELETE, FORMAT, PRINT, VIEW, plus extended use of some Tool Kit 2 commands. TK2 is required. These are TURBO compiled for speed. Multitasks and uses minimal key presses. Includes Fast-Disk and Vegemat2, a super clone making program. Also Snap Shot-a directory column or condensed printout program.

4) DOS EMULATOR COMPANION ISSUE DISK by Al Feng- Just released in Oct. issue. Makes better use of Solution, PC Conqueror, DisCover, XOVER, QLuster and scr_codes. If you are going to use the emulators, then check this out, you won't regret this buy.

5) QLuMSi DOS by Al Feng- a MSDOS simulator and front end program for the QL, also includes other programs by AL Feng for file management and cloning of programs. A Great Learning Tool

UPDATE COMPUTER SYSTEMS invites you to submit software programs that may become Issue Disks. Please submit program on disk, with documentation and article to accompany the program. We are here to get North American software available and known. We solicit programs, tips, reviews and utilities for future issues.

TS2068 UPDATE ISSUE DISKS

These disks contain at least one major piece of software written specifically for disk drive and are guaranteed to be worth the money. The rest of the disks are filled with various utility programs taken from the issues of UPDATE and a few surprises thrown in. Half of the money goes to the author and is meant to encourage new programming for the TS2068 that makes use of the various disk drive systems. Presently we are offering disks for the Larken and Oliger Interfaces, but have programs available for the Aerco (just as soon as I hear that there is a demand to have available). All are $20.00 per disk (add $1.00 Canada) and include postage and handling. The programs have been Temporarily lowered in price to make them more widespread among the TS2068 Users! Both 3 1/2 and 5 1/4, 40 and 80 track available. Please add $5.00 for mailing to other countries. We accept personal checks, company checks, money orders as well as International Postal Money Orders. We do not have facilities for charge cards.

1) MITCHELL BUDGET DISK, with wide spreadsheet printer driver, MS-TAS and various other utilities. Available as either Larken or as Oliger format.

2) Bob Hartung DOSDEX UTILITY ISSUE DISK, a complete disk management group of programs for the Oliger Interface only. This includes Multi-Manager for file handling. This collection has recently been updated.

3) MAIL MERGE ISSUE DISK, Oct 87 and Jan 88 issues of UPDATE utilities added to fill out this disk. Includes a tutor program for the Mail Merge program, List Looker, Purity, J-Utilities and Extra Memory Utilities.

4) MITCHELL VIEW CALC ISSUE DISK, forget the old slow VC for tape! The rest of the disk is filled with other utilities plus some Public Domain for fillers. At this time for Larken format only.

5) OLIGER DISK DRIVE BBS PROGRAM, this allows users of the Oliger interface to be able to operate a disk based bulletin board from the TS2068. The disk is also filled with many other Oliger disk routines and tips on using the Oliger System. New by Paul Holmgren. Can use upto four DSQD disk drives.

6)The HYBISCUS ENSEMBLE, consisting of two separate, but complimentary sets of programs. A) Daisy.B6 Ensemble, and B) Udbm.B6 Ensemble. LKDOS only, $22 each or $36 for both. The best file and database available for Larken, by Bill Jones. The price remains the same on this one, no change. Wordprocessor included.

UPDATE COMPUTER SYSTEMS invites you to submit software programs that may become Issue Disks. Please submit program on disk, with documentation and article to accompany the program. We are here to get North American software available and known. We also solicit minor programs, tips and utilities for print in future issues of the magazine. Please do not submit unlistable programs or copy protected programs.